

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; [ca. 1840]—Cols., *Sullivant* (URB); 24 Jun 1890—Olentangy R., Cols., *E. Evans*; 1890? & 1891?—Franklin Co., *Selby*; May 1891—Worthington, *Selby*; Jun 1892—Cols., *Addison*; 6 Aug 1892—Cols., *Werner*; 10 Jul 1932—Taylor's Woods, *Chapman*; 25 May 1971—Don Scott Woods, damp soil in woods, *D. Keil* 7324; 4 Jul 1972—woodlot, Alton-Darby Creek Rd. & Cole Rd., *D. Keil* 9339; 23 Jun 1987—Woodland Memorial Park, 1 mi. S of Rt. 161 on I-71, in Forest Park subdivision, Sharon Twp., *T. Lammers & Lewis* 6126; Summer 1988—along Big Darby Creek between I-70 & Little Darby Creek, Galloway Quad., *Delong*; 31 May 1990—Tuttle Park, E bank of Olentangy R., open woody area, N of Hudson St., Clinton Twp., *Lowden* 4371; 10 Jun 1990—McOwen Rd., woody swampy area, jct. of Dixon Rd., Franklin/Licking Co. line, Jefferson Twp., *Lowden* 4382.

76. *Carex lupulina* Muhl.

Sedge

Similar to *Carex lupuliformis*; blades 4-15 mm wide; carpellate spike 20-35 mm thick, perigynia 20-75; achenes longer than wide, sides at most only slightly concave, angles very little thickened at bend. Syn.: *C. lupulina* var. *polystachya* Schwein. & Torr.

REFERENCES: *Sullivant* 1840:53; *Craig* 1890:108; *Selby & Craig* 1890:17; *Braun* 1967:291 (illus. p. 291).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; [ca. 1840]—Cols., *Sullivant* (URB); 1890—Franklin Co., *Selby*; 11 Jul 1926—Blacklick Woods Metropolitan Park, Truro Twp., *E. Thomas*; 10 Jun 1990—McOwen Rd., woody swampy area, jct. with Dixon Rd., Franklin/Licking Co. line, Jefferson Twp., *Lowden* 4386.

77. †*Carex lupuliformis* Sartwell

False Hop Sedge

Stigmas 3; achene 3-angled; style not jointed with achene; perigynia numerous, papery, inflated, glabrous, 10-15 mm long, nerves more than 12; carpellate spikes oblong or cylindrical; achenes nearly as long as wide, the sides diamond-shaped and concave, angles knobbed.

REFERENCE: ODNR-DNAP 1996.

HERBARIUM RECORDS: 2 Aug 1839—2 m [mi.] E of Worthington, *J. Paddock* Collection (ILL); 5 Sep 1891—Cols., *Werner* (CLM, OS); 6 Aug 1897—Hamilton Twp., *W. Kellerman*; 11 Nov 1984—Gahanna Woods State Nature Preserve, at border of large buttonbush swamp at SW corner of the preserve (V), *Tyrrell*; 6 Aug 1987—Highbanks Metro Park (Delaware Co.), open wet fields, *Watts*.

NOTE: Not mapped for Franklin Co. by *Braun* 1967:292 (illus. p. 291).

## POACEAE, Grass Family

Herbaceous or rarely woody; rhizomes present or absent; internodes hollow or solid, nodes solid; leaves alternate, 2-ranked, linear to lanceolate, parallel-veined, consisting of sheath and blade, the ligule at junction of blade and sheath; unit of inflorescence a spikelet consisting of an axis (rachilla) bearing 2 rows of scales, the 2 lowest empty, these called the first (lower) and second glumes; scales above the glumes called lemmas; in axil of lemma another scale with back to rachilla, the palea; between lemma and palea, subtended by palea, the flower; lemma, palea, and flower parts constituting a floret; spikelet may contain one to many florets; if rachilla is jointed or articulated below each floret, florets fall at maturity from glumes and pedicel; if joint is in pedicel below glumes, the whole spikelet falls as a unit. Flowers hypogynous, bisporangiate, with sometimes some monosporangiate flowers present, too, or rarely all monosporangiate, the species then monoecious or dioecious; perianth none or of 2 or 3 small scales (lodicules); stamens usually 3 (sometimes 1, 2, or 6-many); carpels 3, united; ovary 1-loculed; stigmas 2, usually plumose; seed 1; fruit a grain or rarely a utricle, a nut, or a berry. (Gramineae, nom. altern.)

Cultivated or garden species include: *Coix lachryma-jobi* L. (Job's-tears, cultivated to escaped), blades to 4 cm wide; peduncles in leaf-axils, each bearing a beadlike involucre within which are 2 vestiges and a spikelet of 1 carpellate flower and 1 lemma; staminate inflorescence protruding from orifice of involucre; staminate spikelets 2-flowered (1 Oct 1902—Cols., *J. H. Schaffner*; 20 May 1930—Cols., *Hicks*). Not mentioned for Franklin Co. by *Braun* 1967:174. *Zea mays* L. (Corn, Indian Corn, Maize; cultivated), tall coarse annual; stem solid; staminate spikelets 2-flowered, in pairs, in a one-sided spikelike raceme, the racemes in terminal panicle (tassel); carpellate spikelets usually 2-flowered (1 flower vestigial), in double rows on 1 or more lateral branches (cob), spikelets and cob forming the ear, which is covered with husks; glumes of carpellate spikelet firm, lemma and palea hyaline, style a long silk (189—Cols., [*J. H. Schaffner*]; [1909]—near Cols. (cult.), *A. Crane*; Sep 1913—Cols., cult., *L. Humphrey*; 15 Feb 1927—OSU Bot. Greenhouse, Cols., cult., *J. H. Schaffner*; 1930—Cols. [*J. H. Schaffner*]; 10 Dec 1932—Cols., *J. H. Schaffner*; 10 Mar 1933—OSU Bot. Greenhouse, Cols., cult., *J. H. Schaffner*; Winter-Spring 1936—OSU Greenhouse, Cols., cult., *J. H. Schaffner*). Not mentioned for Franklin Co. by *Braun* 1967:174. †*Chasmanthium latifolium* (Michx.) Yates (Wild Oats, cultivated), blades 1-2 cm wide; panicle drooping; spikelets very flat, large, florets several to many, closely imbricated, lemmas about 1 cm long, striate-nerved, keeled, lowest empty; palea shorter than lemma, keel winged; stamen 1; flowers cleistogamous (18 Aug 1939—Botanic Gardens, OSU, Cols., *Dore*); Syn.: *Uniola latifolia* Michx. Not mapped for Franklin Co. by *Braun* 1967:88 (woods and steep banks) (illus. p. 87). *Buchloe dactyloides* (Nutt.) Engelm. (Buffalo

Grass; introduced, perhaps a waif), plants dioecious; staminate spikes 1-3, articulation above the thin glumes, spikelets 2-flowered; carpellate spikes short and head-like, subtended by the dilated many-nerved bases of the two uppermost leaves, the highly modified second glumes ending in 3 triangular lobes are visible from the outside (Aug 1939—lawn at OSU, Cols. Dore). Not treated by Braun (1967). *Tripsacum dactyloides* (L.) L. (Gama-grass, Sesame-grass; garden escape), staminate spikelets above the pistillate ones in the same inflorescence; pistillate flowers sunken in hardened joints of lower portion of same rachis as the terminal staminate spikelets (9 Aug 1939—Botanic Garden, OSU, Cols., Dore). Not treated by Braun (1967).

A very recent introduction in Ohio is *Sclerochloa dura* (L.) P.Beauv., a European plant that is located sparingly in much of the western United States. A low spreading annual, usually under 1 dm tall; spikelets 3-flowered, the third floret sterile; lemmas rounded at the tip, hyaline-margined, with 5 prominent nerves. This new state record has been collected by Allison Cusick in at least seven counties in western Ohio from compacted soil along roadways or berms at fairgrounds and parks. In Franklin County, Cusick collected it along mowed edges of the county's fairgrounds, Norwich St., Hilliard Quad. (Cusick 33073).

Stated lengths of lemmas and glumes do not include awns.

- a Spikelets enclosed in prickly burs. **54. CENCHRUS**
- a' Spikelets not enclosed in prickly burs.
  - b Florets monosporangiate, the staminate and carpellate in different spikelets on same plant; vestigial florets may be present, also.
    - c The two kinds of spikelets in different parts of same inflorescence.
      - d Carpellate spikelets surrounded by beadlike involucre from top of which staminate part of inflorescence protrudes. *Coix lachrymajobi* L., Job's-tears
      - d' Spikelets not covered with beadlike involucre; upper branches of terminal panicle bearing carpellate spikelets; lower branches bearing staminate spikelets. **2. ZIZANIA**
    - c' The two kinds of spikelets in different inflorescences, the staminate in terminal panicle (tassel), the carpellate in rows on one or more axillary branches. *Zea mays* L., Corn
  - b' Florets bisporangiate; some monosporangiate and/or vestigial ones may be present, also.
    - e Spikelets in definite rows on a rachis; inflorescence a single spike or spikelike raceme or a cluster of spikes or spikelike racemes. **KEY A**
    - e' Spikelets not in definite rows; inflorescence an open or a narrow panicle, sometimes dense and spikelike.
      - f Spikelet with 2 or more bisporangiate florets. **KEY B**
      - f' Spikelet with 1 bisporangiate floret; 1 or more staminate and/or vestigial florets may be present, also. **KEY C**

#### KEY A. SPIKELETS IN ROWS ON A RACHIS

- a Single spikelets or groups of spikelets in 2 rows on opposite sides of rachis; inflorescence a single spike or spikelike raceme, not one-sided.
  - b Spikelets solitary at each node of rachis.
    - c Spikelet with edge to rachis. **9. LOLIUM**
    - c' Spikelet with side to rachis.
      - d Glumes ovate; lemma ovate, asymmetric, awned or awnless; spikelets 2-5-flowered. **35. TRITICUM**
      - d' Glumes and lemmas lanceolate or narrower.
        - e Spikelets several-flowered; lemma symmetric, awned or awnless; glumes lanceolate.
          - f Spikelets crowded on rachis, spreading, each reaching almost to tip of one next above on same side. **33. AGROPYRON**
          - f' Spikelets ascending or appressed, more remote, each sometimes overlapping base of one next above on same side but not reaching to its tip.
            - g Without rhizomes; anthers 1-2.5 mm long. **30. ELYMUS**
            - g' With rhizomes; anthers 3-7 mm long. **31. ELYTRIGIA**
          - e' Spikelet 2-flowered; lemma long-awned, ciliate keel on one side of center; glumes linear. **34. SECALE**
    - b' Spikelets 2 or more at each node of rachis (sometimes fewer at base of spike), lateral ones sometimes awnlike.

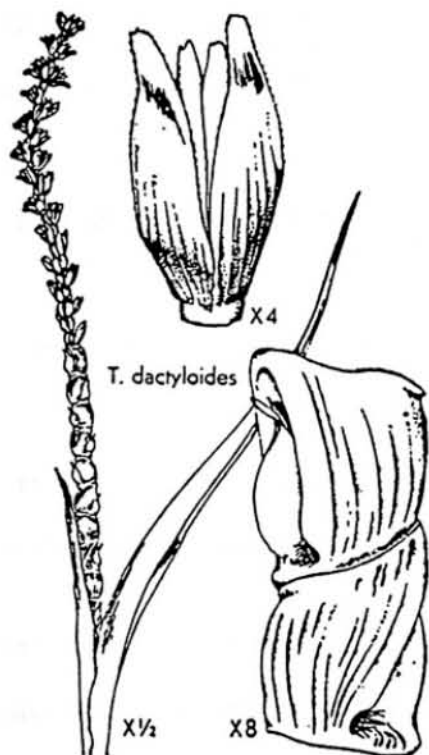
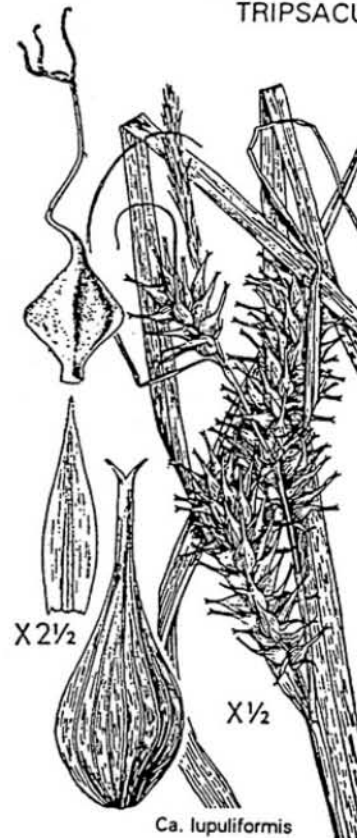
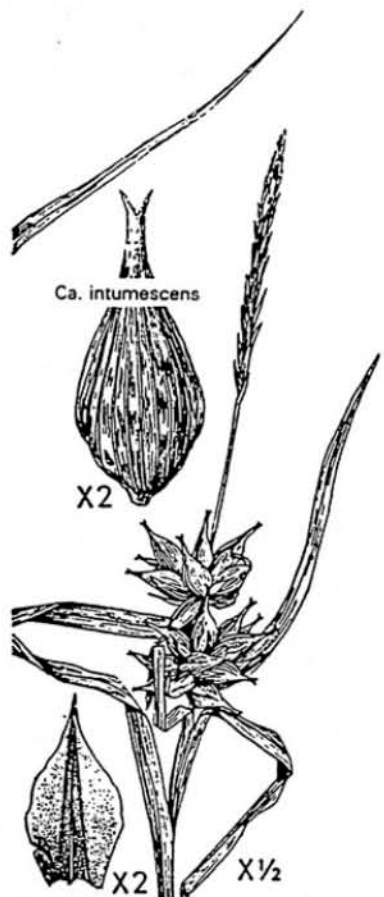
- h Spikelets usually 3 at each node of rachis, each with a perfect floret or lateral ones vestigial. **32. HORDEUM**
- h' Spikelets 2 at each node of rachis, each containing 1 or more perfect florets; or spikelets more than 2 at each node, then each spikelet 2-6-flowered. **30. ELYMUS**
- a' Single spikelets or groups of spikelets in rows, usually on one side of rachis; spikes or spike-like racemes clustered or, if rarely solitary, then one-sided.
- i Glumes absent or vestigial; spikelet laterally flattened, its edges formed by keel of lemma and of palea; lemma awnless. **1. LEERSIA**
- i' At least one glume well developed.
- j Spikelets laterally flattened or articulation above glumes (rarely whole spike falling entire); both glumes present; staminate or vestigial florets, when present, above perfect florets.
- k Inflorescence-branches attached at, or also near, tip of peduncle.
- l Lemma of perfect floret and of rudimentary floret both awned. **45. CHLORIS**
- l' Lemmas awnless.
- m Spikes 5 mm wide; spikelet with 2-several perfect florets. **42. ELEUSINE**
- m' Spikes 2-3 mm wide; spikelet with 1 perfect floret. **46. CYNODON**
- k' Inflorescence-branches racemously attached along an elongate axis.
- n Panicle-branches reflexed, about 2 cm long, falling entire. **48. BOUTELOUA**
- n' Panicle-branches appressed or erect or, if spreading, more than 2 cm long.
- o Spikelets closely imbricated, with 1 perfect floret and no vestigial florets; articulation below glumes; panicle-branches erect or appressed. **47. SPARTINA**
- o' Spikelets more distant; articulation above glumes; panicle-branches slender, many, spreading, or branches long and ascending. **40. LEPTOCHLOA**
- j' Spikelets not laterally flattened, sometimes dorsally flattened; articulation below glumes; one glume sometimes absent; a staminate or a vestigial floret below perfect floret; sometimes whole spikelet vestigial.
- p Lemma and palea of bisporangiate floret firmer than glumes; below this floret are lower lemma and 1 or 2 glumes, all membranous; if spikelets in pairs, both of pair containing a perfect floret.
- q Both glumes present; lemma of perfect floret pointed or awned, its sides, but not its tip, inrolled around palea. **50. ECHINOCHLOA**
- q' Second glume present; first glume absent or minute.
- r Spikelet flattened, apex acute; rachis not wider than rows of spikelets attached to it; lemma of perfect floret not inrolled around palea. **53. DIGITARIA**
- r' Spikelet plano-convex, apex blunt, or rachis wider than rows of spikelets; lemma of perfect floret hard, margins inrolled. **51. PASPALUM**
- p' Glumes firmer than lemmas; spikelets in pairs, 1 sessile, containing a perfect floret, the other pediceled and vestigial or containing a staminate floret.
- s Each peduncle bearing 1 raceme. **58. SCHIZACHYRIUM**
- s' Each peduncle bearing 2-6 racemes. **57. ANDROPOGON**

KEY B. SPIKELETS NOT IN ROWS, EACH CONTAINING TWO  
OR MORE BISPORANGIATE FLORETS

- a At least 1 glume overtopping body of lemma just above it; or lower lemma awned about middle of back or below; or both characters present.
- b Glumes about 2 cm long, 7-11-nerved, usually exceeding upper lemma; lemma awnless or awned from back; panicle open. **17. AVENA**
- b' Glumes shorter, with fewer nerves.
- c Lower lemma awned from base of terminal teeth, awn bent and spiral at base; spikelets several-flowered; each glume overtopping floret just above it. **36. DANTHONIA**
- c' Lower lemma awned from middle of back or below; spikelet 2-flowered; articulation above glumes.
- d Panicle open, spreading, bases of branches naked; both florets of spikelet perfect; lower glume not more than 5 mm long. **20. DESCHAMPSIA**
- d' Panicle narrow, the whorled branches usually bearing spikelets to base; lower floret staminate, upper perfect, both lemmas awned; longer glume 7-9 mm long. **16. ARRHENATHERUM**
- a' Neither glume overtopping body of lemma just above it; lemmas awned above middle or awnless.



CAREX  
CHASMANTHIUM  
TRIPSACUM



- c' Glumes small, the first sometimes absent.
- d Culms low and slender, decumbent at base; blades 2-4 mm wide; lemma about 2 mm long.  
**44. MUHLENBERGIA**
- d' Culms tall, erect; blades about 1 cm or more wide; lemma about 1 cm long. **4. BRACHYELYTRUM**
- b' Glumes present, at least ¼ as long as lemma.
- e Hairs of callus of lemma half length of lemma or more; rachilla prolonged behind palea, long-hairy.  
**24. CALAMAGROSTIS**
- e' Hairs of callus of lemma, if present, less than half length of lemma.
- f Inflorescence cylindric or nearly so, dense and spikelike.
- g Glumes awned.
- h Glumes equal, truncate at tip, keels pectinate-ciliate, body longer than lemma, awn about 1 mm long. **28. PHLEUM**
- h' Glumes tapering to tip, body not longer than lemma, awns variable in length, to 4 mm.  
**44. MUHLENBERGIA**
- g' Glumes not awned. **27. ALOPECURUS**
- f' Inflorescence not dense and spikelike.
- i Lemma at maturity not firmer than glumes.
- j Articulation below glumes; lemma with minute straight awn from just below tip. **26. CINNA**
- j' Articulation above glumes.
- k Lemma 1-nerved; palea often longer than lemma. **43. SPOROBOLUS**
- k' Lemma 3-5-nerved; palea not longer than lemma.
- l Lemma usually shorter and thinner than glumes; palea absent or not more than 2/3 as long as lemma. **25. AGROSTIS**
- l' Lemma not shorter than glumes; palea and body of lemma about equal in length.  
**44. MUHLENBERGIA**
- i' Lemma at maturity obviously firmer than glumes.
- m Lemma and palea together ellipsoid in shape; callus short and blunt; lemma awnless or with straight awn; glumes ovate or broadly elliptic.
- n Lemma awnless, edges wrapped around palea, pale at maturity; ligule membranous, to 6 mm long or more. **6. MILIUM**
- n' Lemma awned, awn straight or flexuous, deciduous; lemma dark at maturity.  
**5. ORYZOPSIS**
- m' Lemma and palea together terete, linear; callus hard and sharp; lemma with branched 3-parted awn, lateral branches sometimes short; glumes narrow. **38. ARISTIDA**
- a' One or 2 staminate or vestigial florets below or rarely above bisporangiate floret, vestigial floret consisting of lemma and palea, lemma only, or small vestige.
- o Spikelet with involucre of bristles. **52. SETARIA**
- o' Spikelet without involucre of bristles.
- p Spikelets in pairs, one sessile, containing a bisporangiate floret (plus a vestigial one), the other a pedicel, with or without a spikelet; lemma thin and hyaline, less firm than glumes.
- q Lemma awnless; pedicel bearing a spikelet. **55. SORGHUM**
- q' Lemma awned; pedicel naked. **56. SORGHASTRUM**
- p' Spikelets not in pairs or, if rarely so, then each spikelet of pair containing a bisporangiate floret; lemma of bisporangiate floret firmer than glumes.
- r Articulation above glumes.
- s Glumes equal, as long as or longer than lemma.
- t Glumes and lemma about equal; spikelet containing 1 perfect floret between 2 staminate florets. **21. HIEROCHLOE**
- t' Glumes longer than lemma, keeled or winged; 2 minute scales below perfect floret.  
**23. PHALARIS**
- s' Glumes unequal.
- u Panicle spikelike; spikelet with 1 bisporangiate floret between and exceeded by 2 brown hairy awned scales. **22. ANTHOXANTHUM**
- u' Panicle narrow, not spikelike; spikelet with 2 florets, lower staminate, upper bisporangiate; both lemmas awned. **16. ARRHENATHERUM**

r' Articulation below glumes, both glumes obvious; upper floret bisporangiate, its lemma and palea firmer than glumes with lemma inrolled around palea, below its palea are lower lemma and first glume, below its lemma is second glume, all membranous.

v Ligule absent; spikelets often awned, often hispid; tip of lemma not inrolled.

**50. ECHINOCHLOA**

v' Ligule present; spikelets not awned; lemma inrolled all around palea. **49. PANICUM**

**1. LEERSIA Sw.**

Stem weak, often decumbent; spikelets 1-flowered, sessile or nearly so on slender panicle-branches; glumes none; lemma boat-shaped, folded, awnless, 5-nerved; palea narrower, 3-nerved, keeled, margins clasped by margins of lemma.

a Panicle-branches 2 or more at lower nodes; edges of blades usually sharp, cutting; stamens 3. **1. *L. oryzoides***

a' Panicle-branches solitary at nodes; edges of blades slightly rough but not cutting; stamens 2. **2. *L. virginica***

**1. *Leersia oryzoides* (L.) Sw.**

Rice Cutgrass, Cut Grass

Spikelets laterally flattened, over 4 mm long, containing one bisporangiate floret; glumes none; lemma boat shaped, awnless; palea narrower. Edges of blades very harsh and cutting; lower branches of panicle more than 1 at a node; rhizome slender.

REFERENCES: Sullivant 1840:46; Craig 1890:108 (common in swampy places along the river and W of the lake); Selby & Craig 1890:18; Braun 1967:140 (illus. p. 139).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 24 Aug 1892—Franklin Co., *Bogue*; 13 Sep 1895—Cols., *Osburn*; 6 Aug 1897—Hamilton Twp., *W. Kellerman*; 6 Nov 1984—Gahanna Woods State Nature Preserve, swamp in SW corner of Preserve (V), *Tyrrell*; Summer 1988—along the Olentangy R., OSU campus, Cols., *Delong*; Summer 1988—along Big Darby Creek between I-70 and Little Darby Creek, Galloway Quad., *Delong*; 23 Sep 1991—Scioto R., just N of I-270, fairly common on damp gravel bars, Hamilton Twp., SW Cols. Quad., *McCormac 4339*.

**2. *Leersia virginica* Willd.**

White Grass

Edges of blades not cutting; panicle-branches one at a node; spikelets usually less than 4 mm long; rhizome stout.

REFERENCES: Sullivant 1840:46; Selby & Craig 1890:18; Kellerman & Werner 1893:23 (first observed in a bed of ferns near the Botanical Bldg., 9 Aug 1890; rather common in the woods, occasional masses of it have been found along the line of the brook); Braun 1967:140 (illus. p. 139).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 9 Aug 1890—Cols., *Werner* (CLM, OS); 20 Aug 1890—Cols., *Werner* (CLM); 3 Sep 1907—Cols., *W. Kellerman*; 18 Sep 1927—Cols., *E. Thomas*; 29 May 1988—Highbanks Metro Park (Delaware Co.), farm area, woods, *Morawetz* (OWU); 23 Sep 1991—Scioto R., fairly common on damp gravel bars, just N of I-270, Hamilton Twp., SW Cols. Quad., *McCormac 4338*; 24 Jul 1992—Sharon Woods Metro Park, common in woods, Sharon Twp., *Watts 626*.

**2. ZIZANIA L. Wild Rice**

Very tall aquatic annual; blades 1-4 cm wide; spikelets 1-flowered, monosporangiate; glumes none or vestigial; lemma of staminate floret narrow, membranous, about 1 cm long; lemma of carpellate floret 2 cm long, firm, long-awned; panicle large, lower branches spreading, bearing staminate spikelets, upper branches ascending, bearing early-deciduous carpellate spikelets.

**1. †*Zizania aquatica* L.**

Wild Rice, Indian Rice, Water Oats

Upper terminal portion of panicle bearing early-deciduous carpellate spikelets on ascending branches; lower branches spreading and bearing staminate spikelets. Spikelets 1-flowered; lemma of staminate floret narrow, long-awned.

REFERENCES: Sullivant 1840:46; Selby & Craig 1890:18.

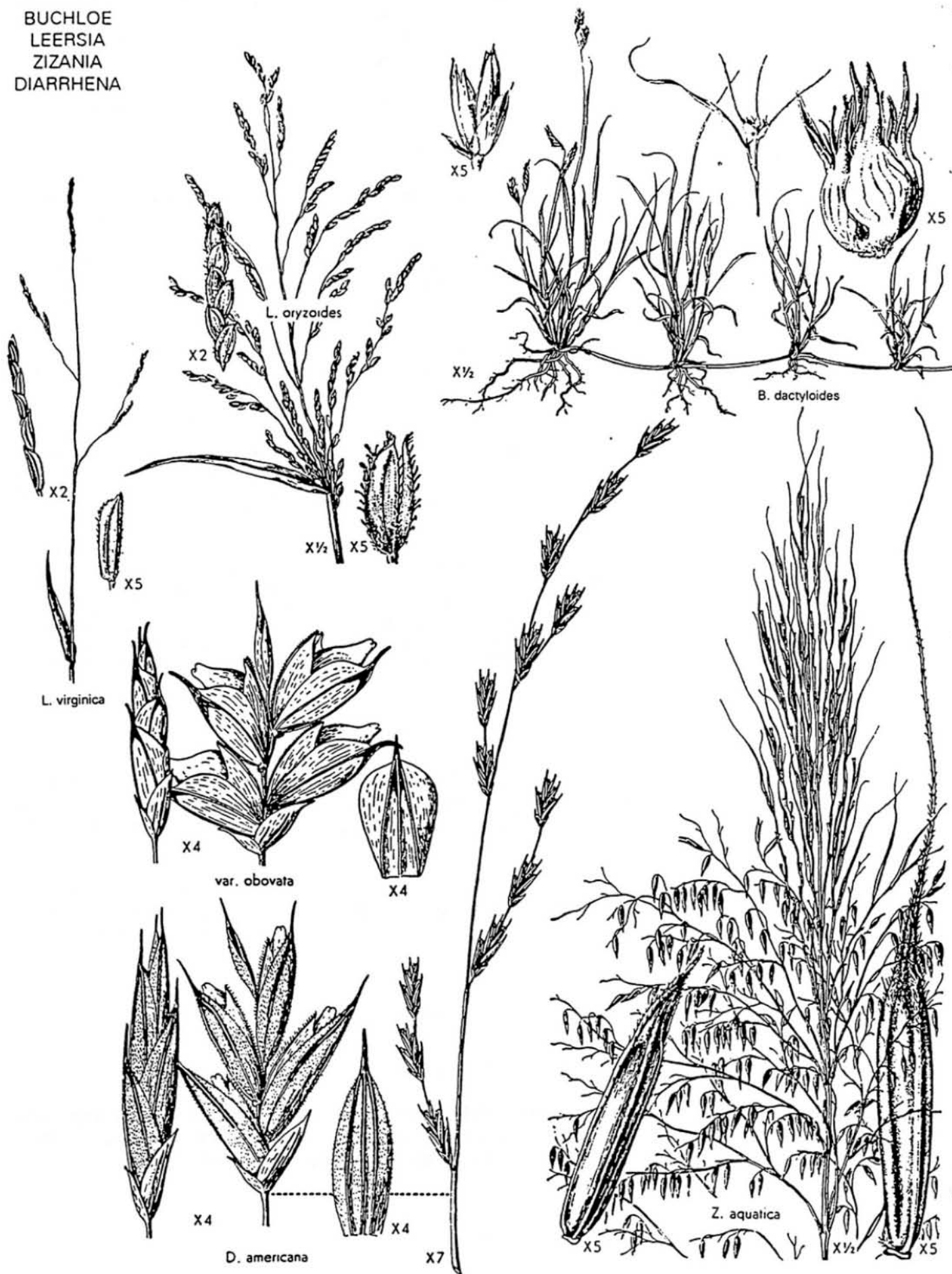
HERBARIUM RECORD: 1840—Cols., *Sullivant*.

NOTE: Not mapped for Franklin Co. by Braun 1967:141 (usually in shallow water) (illus. p. 139).

**3. DIARRHENA P.Beauv.**

Tall, with rhizomes; blades 1-2 cm wide, elongate; spikelets few-flowered, few, in a long narrow drooping panicle; first glume 1-nerved, second 3-5-nerved; lemma broad, coriaceous, shining, 3-nerved, pointed; palea firm, obtuse, shorter than lemma; lemma and palea at maturity widely separated by the large ovoid beaked grain.

BUCHLOE  
LEERSIA  
ZIZANIA  
DIARRHENA





1. *Diarrhenia americana* P.Beauv.

Spikelets containing two or more bisporangiate florets; neither glume overtopping body of lemma just above; articulation above glumes; lemma 3-nerved, glabrous, 6-10 mm long, grains swollen at maturity.

Two varieties are recognized:

var. *americana*

Lemma 7-10 mm long, ovate, widest below the middle, gradually tapering to cusp; callus hairy on all but the lowest lemma.

REFERENCES: Sullivant 1840:49; Selby & Craig 1890:17; Selby 1891a:111a (#974 Re-collected); Braun 1967:86 (illus. p. 87); Brandenburg et al. 1991:133 (illus. p. 134).

HERBARIUM RECORD: 15 Aug 1936—near Elk's Golf Course, *Blaydes*.

var. *obovata* Gleason

Similar to the typical var. except lemma shorter than 6 mm long, obovate, widest about the middle and abruptly rounded to cusp; callus glabrous on lemmas. Syn.: *Diarrhenia obovata* (Gleason) Brandenburg

REFERENCES: Braun 1967:86 (illus. p. 87); Brandenburg et al. 1991:133, 136 (illus. p. 134).

HERBARIUM RECORDS: Aug 1892—Cols., *Werner* (CLM, OS); 7 Nov 1959—along W side of Olentangy R. about 1 mi. N of Ohio State Stadium, *Cusick*.

4. BRACHYELYTRUM P.Beauv.

Blades to 16 mm wide, lanceolate, tapering to both ends; panicle narrow, of few spikelets; spikelet 1-flowered; rachilla prolonged behind floret as a bristle; glumes minute, the first often wanting, the second sometimes awned; lemma about 1 cm long, narrow, firm, with long terminal awn.

1. *Brachyelytrum erectum* (Schreb.) P.Beauv.

Blades lanceolate, about 1 cm wide, tapering at both ends; panicle narrow; spikelets few, 1-flowered; rachilla prolonged behind floret as a bristle; first glume minute to absent, the second sometimes awned; lemma about 1 cm long, long awned. Deep dry woods.

REFERENCES: Sullivant 1840:48 (*Muhlenbergia brachyelytrum* Trin.); Selby & Craig 1890:17 (*Brachyelytrum aristatum* P.Beauv.); Braun 1967:127 (illus. p. 126).

HERBARIUM RECORDS: 15 Jul 1838—Worthington, *J. Paddock Collection* (ILL); 1840—Cols., *Sullivant*; 7 Jul 1892—Worthington, *Bogue*; 19 Aug 1907—Cols., *W. Kellerman*; 15 Jul 1939—Cols., *Dore*; 9 Jul 1992—Blendon Woods Metro Park, common in upland woods, *Watts 659*.

5. ORYZOPSIS Michx. Rice Grass

Blades 5-15 mm wide; spikelets 1-flowered, 7-9 mm long, rather few, near ends of the few panicle-branches; glumes about 7-nerved; lemma a little shorter than glumes, indurate, convolute, dark in fruit, awn deciduous.

1. †*Oryzopsis racemosa* (Sm.) Ricker

Rice Grass

Spikelet 1-flowered; callus of lemma less than half length of lemma; panicle-branches few; glumes equal, 6.5-9.5 mm long, broadly elliptic; lemma with long-straight-awn, body of lemma slightly shorter than glumes, dark and hairy at maturity.

REFERENCE: Selby & Craig 1890:18 (*Oryzopsis melanocarpa* Muhl.).

HERBARIUM RECORD: 1840—Cols., *Sullivant*.

NOTE: Not mapped for Franklin Co. by Braun 1967:129 (woods) (illus. p. 126).

6. MILIUM L.

Smooth; blades to 1.5 cm wide; spikelets 1-flowered, 3-4 mm long, on upper half of branches of open terminal panicle; glumes thin, a little longer than lemma; lemma firmer than glumes, smooth and shining, margins inrolled around palea; ligule to 6 mm long, membranous, toothed.

1. *Milium effusum* L.

Millet Grass

Spikelets 1-flowered, on open terminal panicle; lemma awnless; glumes thin, about 4 mm long, a little longer than firmer lemma; lemma margins inrolled around palea; ligule to 6 mm long.

REFERENCES: Sullivant 1840:47; Selby 1891a:111a; Braun 1967:127 (an attractive woodland grass) (illus. p. 126).

BRACHYELYTRUM  
ORYZOPSIS  
MILIUM  
FESTUCA



HERBARIUM RECORDS: 1840—Cols., *Sullivant*; [ca. 1840]—Cols., *Sullivant* (URB); 17 May 1891—Cols., not abundant, *Werner*; 26 May 1891—Cols., *Werner* (CLM).

## 7. FESTUCA L. Fescue

Perennials, tufted; culms short to moderately tall; blades flat or rolled; spikelets few- to several-flowered; glumes 1- and 3-nerved; lemma rounded on back or keeled at tip, awned or awnless, 5-nerved, nerves often obscure; stamens 3.

- a Blades flat, more than 3 mm wide; lemma awnless or with awn to 2 mm long; perennial without a basal mass of old leaf-bases.
  - b Panicle-branches spikelet-bearing only near tips; spikelets about 5 mm long; blades without auricles.
    - 2. *F. subverticillata*
  - b' Panicle-branches spikelet-bearing almost to base; spikelets about 1 cm long; blades with auricles. 1. *F. elatior*,
    - c Auricles with smooth margin, var. *elatior*
    - c' Auricles with ciliate margin, var. *arundinacea*
- a' Blades rolled, folded, setaceous, or flat, less than 3 mm wide; lemma awnless or awn shorter than body; perennials with a dense basal mass of old leaf-bases.
  - d Culms erect at base; sheaths drab or light in color, not readily disintegrating into fibers. 3. *F. ovina*
  - d' Culms usually decumbent at base; sheaths red or brown, soon disintegrating into fibers. 4. *F. rubra*

### 1. \**Festuca elatior* L.

Meadow Fescue, Tall Fescue Grass

Naturalized (native of Europe)

Spikelets containing two or more bisporangiate florets; articulation above glumes; lemmas awned or acute at tip, the 5 nerves usually obscure; lemma rounded on back; panicle branches spikelet-bearing almost to base; spikelets about 1 cm long; blades with auricles.

Two varieties are recognized:

var. *elatior*

Auricles with smooth margin.

REFERENCES: Craig 1890:109 (common in the grass-plot field W of President Scott's house); Selby & Craig 1890:18.

HERBARIUM RECORDS: 25 Jun 1891—Cols., *Werner* (CLM, OS); 17 Jun 1892—High St., Cols., *Selby* (WOOS); 15 Jun 1895—Cols., *W. Kellerman*; 16 Jun 1898—OSU Farm (cult.), Cols., *W. Kellerman*; 25 Jun 1977—Pickerington Marsh, intersection of Wright Rd. & Bowen Rd., 3 mi. W of Pickerington and 3 mi. N of Canal Winchester, Section 18, Madison Twp, Section 17, Violet Twp., Franklin/Fairfield Co. Line, *Eu. Wright*; 10 Jun 1989—Frank Rd. turn off I-71, S of Cols., between I-71 & Rt. 104, Franklin Twp., *Lowden 4133*; 7 Jun 1991—Boyer Park, end of Park St., E of Rt. 3, Westerville, Blendon Twp., *Lowden 4661*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:72 (a common grass of meadows and roadsides ... vars. ... widely planted along highways in Ohio) (illus. p. 74).

var. *arundinacea* (Schreb.) Wimm.

Similar to the typical var. except auricles with ciliate margins. Roadsides.

HERBARIUM RECORDS: 11 Aug 1952—OSU campus, *Weishaup*; 8 Aug 1963—Rt. 3 & 161, Franklin Co., *A. Brooks 3662*; 1 Jun 1986—N of St. Michaels Church, corner of Selby and High St., *Benkowski 68*; 30 May 1990—N side of Orders Rd. in an open woody field border, 0.5 mi. W of Hoover Rd., Jackson Twp., *Lowden 4360*; 12 Sep 1991—Hoover Dam Park, W of Cabbage Rd. along Walnut St., Blendon Twp., *Lowden 4839*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:72 (illus. p. 74).

### 2. *Festuca subverticillata* (Pers.) E.B. Alexeev

Nodding Fescue

Blades more than 3 mm wide, without auricles; panicle branches spikelet-bearing only near tips; spikelets about 5 mm long. Open dry woods. Syn.: *F. nutans* Willd., *F. obtusa* Biehler

REFERENCES: *Sullivant* 1840:49; Selby & Craig 1890:18; *Kellerman & Werner* 1893:231 (found in the timber N of the lagoon, Jun 1891); Braun 1967:72 (illus. p. 74).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 5 Jun 1892—Cols., *Bogue*; 3 Jul 1939—Cols., *Dore*; 2 Jun 1991—Hoover Dam Park, woody ravine area, W of Cabbage Rd., Blendon Twp., *Lowden 4650*.

### 3. \**Festuca ovina* L.

Sheep Fescue

Adventive (native of Europe)

Dense basal mass of old leaf-bases; blades rolled, less than 3 mm wide; lemma awned, shorter than body of lemma; culms erect at base; sheaths drab or light in color, not readily disintegrating into fibers. Cultivated.

HERBARIUM RECORDS: 14 May 1910—Cols., *Hambleton*; Spring 1914—Cols., cult., *J. H. Schaffner*; May 1973—Don Scott Field.

NOTE: Not mentioned for Franklin Co. by Braun 1967:73.

4. †*Festuca rubra* L.

REFERENCE: Jones 1943:94.

NOTE: No specimens seen from Franklin Co. Not mentioned for Franklin Co. by Braun 1967:73.

Red Fescue Grass

8. *VULPIA* C.C.Gmel.

Annuals, culms short; anther commonly only 1, less often 2, rarely 3; cleistogamous or nearly so. (Often incl. in *Festuca*)

1. *Vulpia octoflora* (Walter) Rydb.

Six-weeks Fescue

Plants slender without a basal mat of old stems and leaf-bases; sheaths and/or culms sometimes puberulent; blade rolled, less than 3 mm wide; spikelet usually 6-10 flowered; first glume more than half as long as second; lemma 2.5-5.0 mm long, its awn 1-5 mm long. Syn.: *Festuca octoflora* Walter, *F. tenella* Willd.

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 30 May 1993—E side of Hoover Dam park, old bluff of Big Walnut Creek, S of Walnut St. & W of Cabbage Rd., Blendon Twp., *Lowden 5052*; 31 May 1993—jct. of Graessle Rd. & 665, bluff, Battelle Darby Metro Park, Pleasant Twp., *Lowden 5055*.

NOTE: *Sullivant* 1840:49 and Selby & Craig 1890:18 reported on plants collected in adjacent counties. Not mapped for Franklin Co. by Braun 1967:73 (illus. p. 74).

9. *LOLIUM* L. Rye Grass

Spikelets with several to many florets, solitary at nodes of rachis, edge to rachis; first glume (on side of spikelet next to rachis) usually absent except in terminal spikelet; second glume 3-5-nerved; lemma convex on back, 5-7-nerved.

1. \**Lolium perenne* L.

Rye Grass

Naturalized (native of Europe)

Spikelets in two rows on opposite sides of rachis; spikelets solitary at each node of rachis, flattened laterally, with edge to rachis; first glume absent except in the upper couple of spikelets.

Two varieties are recognized:

var. *perenne*

Perennial or English Rye Grass, Darnel

Lemma awnless or nearly so; spikelets usually 5-13 flowered; tip of the glume extending nearly or quite to the top of the lemma just above it; blades folded in bud, perennial. Waste places.

REFERENCE: Craig 1890:110 (common in the field back of President Scott's, and occasionally on the campus).

HERBARIUM RECORDS: 12 Jun 1882—OSU campus, Cols.; 12 Jun 1890—Cols., *Thorne*; 28 May 1933—Franklin Co., *Weishaup*; 12 Jun 1934—OSU campus, *J. H. Schaffner*; 3 Jul 1939—Cols., *Dore*; 23 May 1963—waste place beside OSU sewage disposal plant, Cols., *Cusick*; 14 Jun 1989—walkway between B&Z & Biological Sciences Bldg., OSU campus, *Lowden 4153B*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:101 (introduced and less extensively planted in the U.S. for hay and pasture and in lawn mixtures) (illus. p. 100).

var. *aristatum* Willd.

Italian Rye Grass

Lemmas usually awned, at least in upper spikelets; spikelets usually 8-10(-22) flowered; tip of the glume seldom extending to the top of the lemma just above it; blades rolled in bud, annual. Waste ground, cultivated in gardens, along roadways. Syn.: *L. multiflorum* Lam.

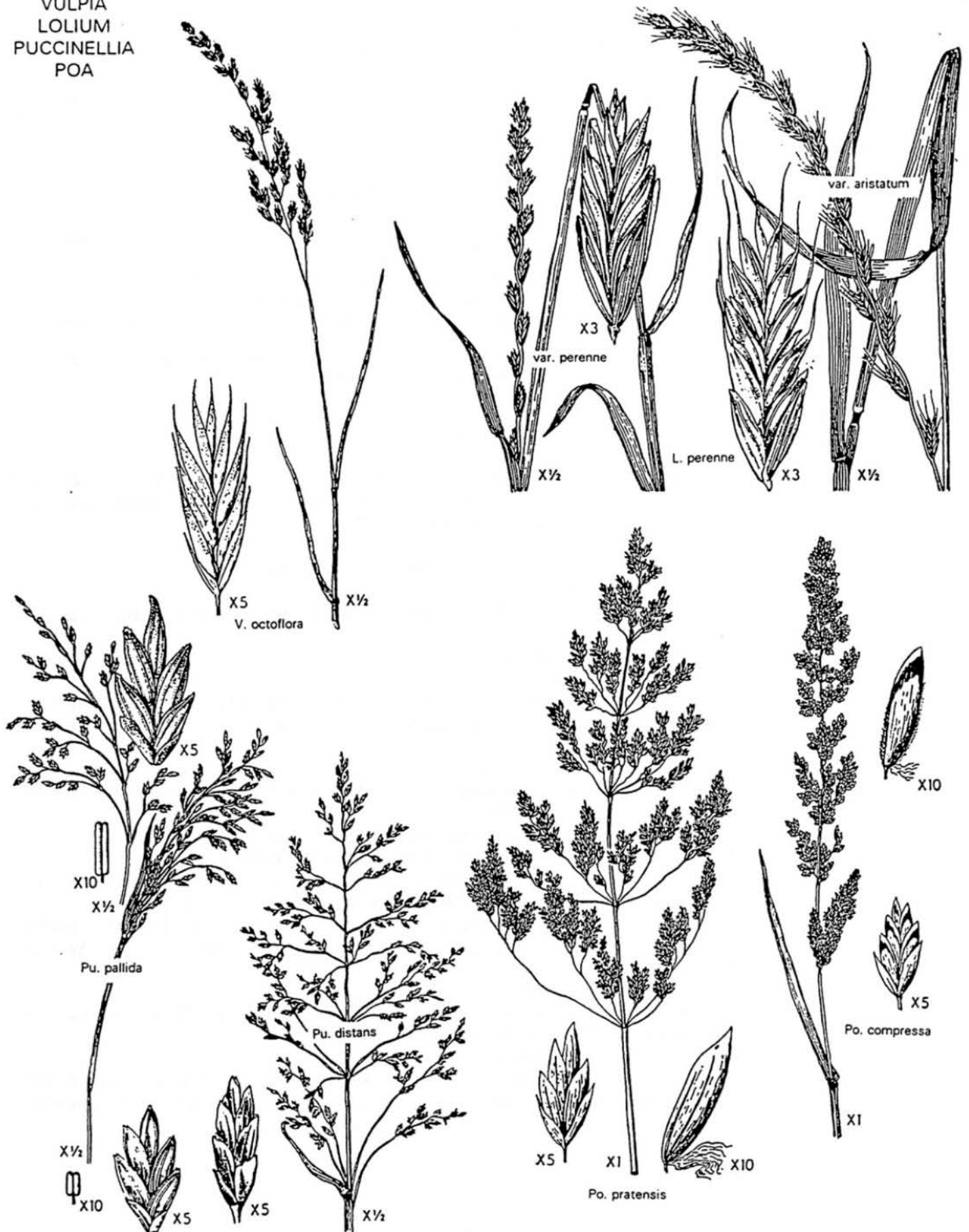
HERBARIUM RECORDS: 16 Aug 1898—OSU Bot. Gardens, cult., *J. H. Schaffner*; 24 Aug 1898—OSU Bot. Gardens; 12 Jun 1934—OSU campus, waste ground, Cols., *J. H. Schaffner*; 3 Jul 1939—along roadway, Cols., *Dore*; 1 Jun 1982—Cooper Rd., [Blendon Twp.], *Owens*; 15 May 1986—Park of Roses, Cols., *Blanco*; 14 Jun 1989—walkway between B&Z & Biological Sciences Bldg., OSU campus, *Lowden 4153A*; 13 Jun 1990—disturbed roadside, E. Broad St. (Cols.-Newark Rd., Rt. 16) ½ mi. W of Franklin/Licking Co. Line, Jefferson Twp., *Lowden 4402*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:101 (cultivated in America as forage and in lawn mixtures; escaped, fields and roadsides) (illus. p. 100).

10. *PUCCINELLIA* Parl. Alkali Grass

Spikelets few-flowered, terete or subterete; articulation above glumes between lemmas; lemmas 5-nerved (a few may be 7-nerved); sheaths open; spikelets much like those of *Glyceria*.

VULPIA  
LOLIUM  
PUCCINELLIA  
POA



- a Panicle-branches ascending; lemmas sharply 5-nerved, finely hairy or scabrous, erose at the rounded tip; swamps and shallow water. 1. *P. pallida*
- a' Lower panicle-branches reflexed; lemmas obscurely 5-nerved, elliptic to obovate, glabrous or short-pilose at base, scabrous on margins toward broadly obtuse to truncate tip; along salt-treated highways. 2. *P. distans*

1. †*Puccinellia pallida* (Torr.) R.T.Clausen Pale Manna Grass

Spikelets not linear, less than 1 cm long; sheaths open; second glume with 3 nerves, rarely 5; lemma sharply 5-nerved, rarely 7; panicle open. Syn.: *Glyceria pallida* (Torr.) Trin.

REFERENCES: Sullivant 1840:49 (*Poa dentata* Torr.); Selby & Craig 1890:18.

HERBARIUM RECORDS: 1840—Cols., Sullivant; [ca. 1840]—Cols., Sullivant (URB).

NOTE: Based on Sullivant's specimens, his *Poa dentata* belongs here. Not mapped for Franklin Co. by Braun 1967:76.

2. \**Puccinellia distans* (Jacq.) Parl. Alkali Grass  
Naturalized (native of Europe)

Spikelets containing two or more (up to 5) bisporangiate florets; articulation above glumes; lemma 2.0 mm long, 5-nerved, rounded on back, apex erose; panicle open, lower panicle-branches reflexed.

HERBARIUM RECORD: 9 Jun 1980—common, median strip of I-270, just E of Sawmill Rd. exit, Dublin, Perry Twp., NW Cols. Quad., Cusick 20113.

NOTE: There are numerous specimens from different counties collected by Cusick at OS. Not mentioned for Franklin Co. by Braun 1967:75 (reports only from Butler Co.) or Weishaupt 1971:34 (habitat dry or moist, sometimes saline).

### 11. POA L. Bluegrass, Meadow Grass

Culms short to moderately tall; tip of blades boat-shaped; spikelets 2-several-flowered, in terminal panicles; first glume with 1 nerve (rarely 3), second with 3 nerves (rarely 5); lemma keeled, 2-5 mm long, usually with tuft of cobwebby hairs (web) at base, 5-nerved, intermediate nerves sometimes faint.

- a All or most of the spikelets consisting not of florets but of bulblets. 3. *P. bulbosa*
- a' Spikelets consisting of florets of usual structure.
  - b Annuals (or winter annuals) of open ground; culms usually 2-3 dm high; panicle ovoid, usually 2-5 cm long. 9. *P. annua*
  - b' Perennials; culms usually taller; panicles usually longer.
    - c Lower panicle-branches 1-3 at a node.
      - d Panicle narrow, branches short, usually 2 at a node, bearing spikelets to base; culms flattened, 2-edged, not tufted, with rhizomes; distinct nerves of lemma 3; at least lowest lemma of spikelet usually sparsely webbed. 2. *P. compressa*
      - d' Panicle open, the branches long, bearing spikelets only toward tips; culms not 2-edged, without rhizomes; lemma 2-3 mm long, obtuse at tip, keel and marginal nerves glabrous, at least the lowest in spikelet with basal web. 6. *P. languida*
    - c' Lower panicle-branches 4 or more at a node; lemma with basal web and pubescent keel.
      - e Marginal nerves of lemma glabrous (sometimes pubescent in *P. trivialis*).
        - f Lemma with 5 distinct nerves; tips of glumes strongly incurved; ligule of upper leaves 4-10 mm long; panicle long-exsert, some branches spikelet-bearing nearly to base. 4. *P. trivialis*
        - f' Lemma with 3 distinct nerves; tips of glumes slightly incurved; ligule of upper leaves 1-2 mm long; base of panicle included, at least at first; spikelets few, borne only at tips of branches. 5. *P. alsodes*
      - e' Marginal nerves of lemma pubescent.
        - g Distinct nerves of lemma 3; ligule 1 mm long or less; panicle 4-10 cm long; glumes acuminate; stem slender, without rhizomes. 8. *P. nemoralis*
        - g' Distinct nerves of lemma 5; ligule of upper leaves 1-2 mm long.
          - h Panicle ovoid, exserted, at least some branches with spikelets to base, lower usually in whorl of 5; lemma pubescent on lower 1/2 to 2/3 of keel; with rhizomes; usually of open places. 1. *P. pratensis*

- h' Panicle oblong; branches bearing a few spikelets on upper half; lemma pubescent on whole length of keel, somewhat pubescent between keel and marginal nerves; without rhizomes; of woodlands. 7. *P. sylvestris*

1. *\*Poa pratensis* L.

Kentucky Bluegrass, June Grass

Naturalized (native of N U.S. & Canada)

Culms usually more than 3 dm tall; lower panicle-branches usually 4 or more at a node; lemma distinctly 5-nerved, with basal web; marginal nerves of lemma pubescent, lemma pubescent on lower 1/2 to 2/3 of keel.

REFERENCES: Sullivant 1840:49 (naturalized plants); Craig 1890:109 (very common in fields, 30 May 1882, 24 May 1887); Selby & Craig 1890:18. HERBARIUM RECORDS: [ca. 1840]—Cols., Sullivant (URB); 18 Jun 1892—OSU grounds, Cols., Selby (WOOS); 6 Jul 1911—Westerville, old meadows, Hanawalt; 7 Jun 1962—roadside, Morse Rd., 1500 feet W of Rt. 3 at RR, Blendon Twp., E. Herrick; 23 May 1963—roadside, Dublin, A. Brooks 3513; 15 May 1986—Park of Roses, Cols., Blanco; 16 May 1986—sidewalk, 2402 East Ave., Cols., R. Burns 20; 3 Jun 1988—Highbanks Metro Park (Delaware Co.), common in dry oak woods, Watts 416; 16 May 1989—RR tracks, Highland Dr., W of Olentangy River Rd., Clinton Twp., Lowden 4068; 23 May 1989—Overbrook Dr. Ravine, E of N. High St., Beechwood area, Clinton Twp., Lowden 4089; 30 May 1990—wet ditch along roadside, Borror Rd., 0.5 mi. W of Rt. 104, Lowden 4354.

NOTE: Not mentioned for Franklin Co. by Braun 1967:81 (certainly the most widely used lawn grass in Ohio, probably introduced from Europe in early colonial times) (illus. p. 80) or Weishaupt 1971:35 (usually in open places).

2. *\*Poa compressa* L.

Canada Blue Grass

Naturalized (native of Europe)

Culms usually more than 3 dm tall; panicles narrow, branches short, bearing spikelets to base; culms flattened, 2-edged; lemma usually webbed at base.

REFERENCES: Sullivant 1840:49; Craig 1890:109 (very abundant in meadows); Selby & Craig 1890:18. HERBARIUM RECORDS: [ca. 1840]—Cols., Sullivant (URB); 15 Jul 1892—Cols., Bogue; Spring 1914—Cols., cult., J. H. Schaffner; 3 Jul 1939—Cols., heavy soil, a common grass, Dore.

NOTE: Not mentioned for Franklin Co. by Braun 1967:79 (throughout Ohio in drier, somewhat poorer soil, where it is sometimes a pasture grass) (illus. p. 80).

3. *\*Poa bulbosa* L.

Bulbous Blue Grass, Meadow Grass

Adventive (native of Europe)

Spikelets mostly of turgid bulblets with prolonged linear tips reaching 15 mm long; panicles 4.0-9.0 cm long, compact.

REFERENCE: Braun 1967:82 (recorded from Franklin Co.; sparsely introduced from Europe in lawns and fields). HERBARIUM RECORDS: 26 Apr 1963—vacant lot between Frambes Ave. and Lane Ave., just E of Neil Ave., Cols., Cusick; 8 May 1991—45 E. Patterson Ave., Clinton Twp., Esselman; 10 May 1992—E side of Olentangy River Rd., S of W. North Broadway, approx. 30 clumps in freshly-disturbed earth, NW Cols. Quad., Cusick 30190.

4. *\*Poa trivialis* L.

Rough Bluegrass

Adventive (native of Europe)

REFERENCES: Sullivant 1840:50; Selby & Craig 1890:18.

NOTE: No specimens seen from Franklin Co. Not mentioned for Franklin Co. by Braun 1967:81 (sometimes used in mixtures for meadows, shaded lawns, and pastures; naturalized in much of Ohio). A Sullivant specimen (Urbana University) questionably labeled *Poa trivialis* was determined *Poa alsodes*.

5. *Poa alsodes* A.Gray

Bluegrass, Meadow Grass

Spikelets containing two or more bisporangiate florets; lemma usually with a tuft of long soft hairs (web) at the base; leaf blades boat-shaped at tip. Culm usually more than 3 dm tall; lower panicle-branches 4 or more at a node; lemma with basal web and pubescent keel; ligule of upper leaves 1-2 mm long.

REFERENCES: Selby & Craig 1890:18; Braun 1967:81 (woods). HERBARIUM RECORDS: [ca. 1840]—Cols., Sullivant (URB); 17 May 1891—near Cols., Werner (CLM, OS); 21 May 1892—Cols., Werner (CLM); 27 May 1892—Franklin Co., Werner.

6. †*Poa languida* Hitchc.

Weak Spear-grass

Panicles 3.5-9.0 cm long, open, the branches long, spikelets borne on tips; lemma with basal web, 2-3 mm long, blunt at tip; marginal nerves and keel of lemma glabrous. Open woods. Syn.: *P. debilis* Torr.

REFERENCE: ODNR-DNAP 1996. HERBARIUM RECORD: 24 Jun 1982—frequent, open woods, W-facing bluff tops above Olentangy R., Highbanks Nature Preserve (Franklin Co.), 0.05-0.15 mi. S of Delaware Co. line, 0.7 mi. WSW of Rt. 23 & Lazelle Rd., Sharon Twp., Powell Quad., Cusick 21731. NOTE: Not mapped for Franklin Co. by Braun 1967:79 (woods).





7. *Poa sylvestris* A.Gray

Bluegrass, Meadow Grass

Culms taller than 3 dm; lower panicle-branches 4 or more at a node; lemma distinctly 5-nerved, with basal web, marginal nerves pubescent; keel of lemma pubescent for whole length; panicle oblong, branches bearing a few spikelets on upper half. Woodlands.

REFERENCES: Selby 1891a:111a; Braun 1967:82 (early spring woodland grass) (illus. p. 80).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 17 May 1891—Cols. & Franklin Co., *Werner* (CLM, OS); 21 May 1892—Alum Creek Station, *Werner*; 21 May 1892—Cols., *Werner* (BGSU, CLM); 27 May 1893—Cols. & Alum Creek Station, *W. Kellerman*; 17 May 1895—N Cols., *W. Kellerman*; 29 May 1901—Cols., *W. Kellerman*.

8. \**Poa nemoralis* L.

Wood Bluegrass

Adventive (native of Europe)

Culms taller than 3 dm; lower panicle-branches 4 or more at a node; glumes acuminate; lemma with basal web; marginal nerves of lemma pubescent; ligule less than 1 mm long.

HERBARIUM RECORD: Spring 1914—Cols., *J. H. Schaffner*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:82.

9. \**Poa annua* L.

Annual Bluegrass

Naturalized (native of Eurasia)

Culms usually less than 3 dm high; panicle ovoid; lemma without web, the 5 distinct nerves usually pubescent towards base; anthers 0.5-1.0 mm long.

REFERENCES: Selby 1891a:111a; Kellerman & Werner 1893:23 (door yard of farm house on Woodward Ave., Jul 1891).

HERBARIUM RECORDS: 11 May 1895—Alum Creek, *W. Kellerman*; 11 May 1895—Alum Creek, *Osburn*; 2 Dec 1959—walk beside Mirror Lake, OSU campus, Cols., *Cusick*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:79 (abundant in lawns in Ohio, where it is usually considered a weed) (illus p. 80).

12. DACTYLIS L. Orchard Grass

Growing in large tufts; blades glaucous; spikelets 2-several-flowered, nearly sessile in dense 1-sided clusters at ends of the few panicle-branches; lemma keeled, awn-pointed, 5-nerved, 5-8 mm long.

1. \**Dactylis glomerata* L.

Orchard Grass

Naturalized (native of Europe)

Spikelets containing two or more bisporangiate florets; articulation above glumes; spikelets several flowered, nearly sessile in dense one-sided clusters at ends of the few panicle-branches; lemma keeled, awn-pointed.

REFERENCES: *Sullivant* 1840:49 (naturalized plants); *Craig* 1890:109 (very abundant in fields and meadows, 9 Jun 1882, 24 May 1887); *Selby* & *Craig* 1890:17.

HERBARIUM RECORDS: 26 Jun 1890—University Woods, Cols., *E. Evans*; 11 Jul 1892—Cols., *Bogue*; 29 May 1933—Franklin Co., *Weishaupt*; [ca. 1982]—Blendon Woods, *Owens*; 31 May 1986—Highbanks Metro Parks (Delaware Co.), *Morawetz*; 18 May 1988—Worthington, vacant lot between 5921-5945 N. High St., 1 mi. S of Rt. 161 & Rt. 23 intersection, *M. Hoffman* 73; 23 May 1989—Overbrook Dr. Ravine, Beechwood area, Clinton Twp., Cols., *Lowden* 4087; 30 May 1990—open woody field border, N side of Orders Rd., 0.5 mi. W of Hoover Rd., Jackson Twp., *Lowden* 4359.

NOTE: Not mentioned for Franklin Co. by Braun 1967:89 (cultivated as a hay & pasture grass) (illus p. 87).

13. GLYCERIA R.Br. Manna Grass

Usually of aquatic or wet-land habitats; sheaths usually closed or partly closed; spikelets of few to many florets, in terminal panicles, glumes 1-3-nerved; lemma rounded on back, nerves usually prominent, apex usually obtuse and hyaline. For *Glyceria pallida*, see *Puccinellia pallida*.

a Sheaths flattened; spikelets linear, 1-4 cm long; panicle narrow, to 5 dm long, branches erect.

b Palea with 2 apical acuminate teeth, extending 1.5-3 mm beyond acute tip of lemma. 2. *G. acutiflora*

b' Palea not toothed or only short-toothed at tip, extending as much as 1 mm beyond obtuse tip of lemma.

1. *G. septentrionalis*

a' Sheaths not or little flattened; spikelets ovate, less than 5 mm long; panicle open, to 2 dm long, lower branches spreading. 3. *G. striata*

1. *Glyceria septentrionalis* Hitchc.

Eastern Manna Grass

DACTYLIS  
GLYCERIA  
MELICA  
SCHIZACHNE



Spikelets linear, 1-4 cm long; panicle narrow, to 5 dm long, branches erect; lemma 4-5 mm long, scabrous between nerves, firm, usually shorter than palea, hyaline tip strongly nerved. Syn.: *G. fluitans* R.Br.

REFERENCES: Sullivant 1840:49; Selby & Craig 1890:18; Braun 1967:76 (illus. p. 74).

HERBARIUM RECORDS: 1840—Cols., Sullivant; [ca. 1840]—Cols., Sullivant (URB); Jun 1892—Cols., Werner; Jul 1892—Cols., Werner (BGSU).

NOTE: The Sullivant specimen agrees with lemma length for *Glyceria septentrionalis*, but hyaline tips of lemma are slightly longer than palea and strongly nerved, characters of *Glyceria borealis* (Nash) Batch.

2. †*Glyceria acutiflora* Torr.

Sharp-glumed Manna Grass

Spikelets containing two or more bisporangiate florets; articulation above glumes; spikelets uniform; panicle branches ascending, not dense; lemma not 2-toothed at apex, rounded on back or keeled only at tip, nerves conspicuous and more than 5. Spikelets linear, 1-4 cm long; panicles narrow, to 5 dm long, branches erect; palea with 2 apical acuminate teeth, extending 1.5-3 mm beyond acute tip of lemma.

HERBARIUM RECORD: 1840—Cols., Sullivant [!CW Rare now].

NOTE: Not mapped for Franklin Co. by Braun 1967:76.

3. *Glyceria striata* (Lam.) Hitchc.

Fowl Manna Grass

Culm slender; sheaths closed, at least below; panicle open, 1-2 dm long, lower branches spreading; spikelet not more than 2.5 mm wide; first glume usually 0.5-1.0 mm long, second glume 1-nerved, 1.0-1.4 mm long; lemma about 2 mm long, 7-nerved; palea more than twice as long as wide. Woods, ditches & swamps. Syn.: *G. nervata* Trin.

REFERENCES: Sullivant 1840:49 (*Poa nervata* Willd.); Selby & Craig 1890:18; Kellerman & Werner 1893:231 (common in the woods, 9 Aug 1880); Braun 1967:77 (illus. p. 74).

HERBARIUM RECORDS: 1840—Cols., Sullivant; 15 June 1895—Cols., W. Kellerman; 27 May 1896—Clintonville, M. Wright; 29 May 1977—OSU West Campus, Cols., W. Carr 262; 1 Jun 1980—along RR tracks 1 blk. E of N. 4th St., between Hudson St. & 19th Ave., SW corner of NE Cols. Quad., W. Carr 2861; 6 Nov 1984—Gahanna Woods State Nature Preserve, swamp in SW corner of preserve (V), Tyrrell; 23 Jun 1987—Woodland Memorial Park, 1 mi. S of Rt. 161 on I-71, in the Forest Park subdivision, Sharon Twp., T. Lammers & Lewis 6127; 10 Jun 1990—McOwen Rd., woody swampy area, jct. McOwen & Dixon Rd., Jefferson Twp., Lowden 4391; 5 Jul 1991—Blacklick Woods Metro, Buttonbush Nature Trail, Reynoldsburg, Rawlings 2.

NOTE: Based on Sullivant's specimen, his *Poa nervata* belongs here.

#### 14. MELICA L. Melic Grass

Sheaths closed; spikelets usually 3-flowered, falling entire, pendent, few in a panicle, rachilla projecting beyond uppermost floret bearing a small club-shaped mass of enfolded empty lemmas; glumes large, membranous, with scarious margins; lemma 7-9 mm long, several-nerved, scarious-margined.

1. †*Melica nitens* Nutt.

Three-flowered Melic, Tall Melic Grass

Spikelets 3-flowered, pendent, articulation below glumes; rachilla beyond uppermost floret bearing a small club-shaped mass of enfolded empty lemmas; glumes 7-8 mm long; lemma 7-9 mm long, many nerved. Syn.: *M. mutica* Walter, *M. nitens* (Scribn.) Nutt. ex Piper, *M. speciosa* Muhl.

REFERENCES: Sullivant 1840:49; Selby & Craig 1890:18.

HERBARIUM RECORDS: 1840—Cols., Sullivant; [ca. 1840]—Cols., Sullivant (URB).

NOTE: Not mapped for Franklin Co. by Braun 1967:91 (prairies, rocky woods) (illus. p. 90).

#### 15. SCHIZACHNE Hack.

Sheaths closed; spikelets several-flowered, in slender panicles; glumes unequal; lemma 2-toothed at apex, about 1 cm long, long-awned, prominently several-nerved, pilose on callus; keels of palea pubescent.

1. †*Schizachne purpurascens* (Torr.) Swallen

False Melic, Oat Grass

Spikelets containing several bisporangiate florets; glumes unequal, articulation below glumes; lemma 5-many nerved, 2-toothed at apex, long-awned, callus of lemma pilose-bearded; keels of palea pubescent. Syn.: *Avena striata* Michx., *Melica striata* (Michx.) Hitchc.

REFERENCES: Craig 1890:109 (rather common in shady places along the river); Jones 1943:99; Braun 1967:91; Stuckey & Roberts 1982:31; McCance 1984:A-51.

HERBARIUM RECORD: 23 May 1903—Big Darby, W. Kellerman.

ARRHENATHERUM  
AVENA  
KOELERIA  
SPHENOPHOLIS



16. *ARRHENATHERUM* P.Beauv. Oat Grass

Tufted, tall; panicle narrow; spikelets shining, 2-flowered, lower floret staminate, upper floret perfect; glumes unequal, broad, first 1-nerved, second about equaling upper floret, 3-nerved; lemmas 5-7-nerved, the lower with a twisted bent awn from below middle, awn of upper short, straight, or rarely longer, twisted and bent; callus hairy.

1. \**Arrhenatherum elatius* (L.) J.Presl & C.Presl

Tall Oat Grass

Adventive (native of Europe)

Spikelets with 2 florets, lower staminate, upper bisporangiate; both lemmas awned, the lower with a twisted bent awn from below middle of lemma, awn of upper short and straight; callus hairy; articulation above glumes, glumes unequal & broad. Cultivated and introduced with nursery stock.

HERBARIUM RECORDS: 8 Aug 1890—Cols., *Werner* (CLM); 9 Aug 1890—OSU grounds, Cols., *Werner*; Spring 1914—Cols., *J. H. Schaffner* 352; 12 Jun 1929—Bexley, Cols., *E. Thomas*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:107 (illus. p. 108).

17. *AVENA* L. Oats

Annuals; panicles loose and open; spikelets large; rachilla hairy between florets; glumes membranous, several-nerved, usually exceeding uppermost floret; lemma indurate, 2-toothed at apex, awned or awnless.

a Lemma hirsute at base and sometimes on back; awn bent and twisted; spikelet usually 3-flowered. 1. *A. fatua*

a' Lemma glabrous; awn straight or absent; spikelet usually 2-flowered. 2. *A. sativa*

1. \**Avena fatua* L.

Wild Oats

Adventive (native of Europe)

Panicles loose and open; spikelets large, containing two or more bisporangiate florets; glumes about 2 cm long. Lemma awned, 2-toothed, hirsute at base and on back; awn bent and twisted.

REFERENCES: Lazenby 1891:302; Selby 1891a:111a (found at Sellsville); Selby 1891b:76.

HERBARIUM RECORD: Jul 1891—Cols., *Werner*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:107 (occasionally found in Ohio in waste places and fields).

2. \**Avena sativa* L.

Common Oats

Adventive (European cultivar)

Similar to *Avena fatua*; lemma glabrous, awn straight or absent. Railways, rubbish dumps & disturbed areas.

HERBARIUM RECORDS: 25 Jun 1899—along RR, Cols., *W. Kellerman*; 11 Jul 1939—Cols., *Dore*; 23 Jun 1977—under I-270 overpass, between Scioto R. & Rt. 745, N of Dublin, *W. Carr* 375.

NOTE: Not mentioned for Franklin Co. by Braun 1967:107 (cultivated extensively in the U.S.; sometimes escaped but not persistent) (illus. p. 108).

18. *KOELERIA* Pers.

Tufted; leaves 1-3 mm wide; panicle silvery-green, narrow; spikelets usually 2-flowered; glumes acute, first 1-nerved, second 3-5 nerved; lemma acute, awnless or rarely short-awned from below apex.

1. †*Koeleria pyramidata* (Lam.) P.Beauv.

Junegrass

Spikelets usually containing two bisporangiate florets. Neither glume overtopping body of lemma just above it; articulation above glume. Panicle dense and spikelike, axis and branches densely short-hairy; lemma 3-4 mm long, awnless. Glumes and lemma acute. Syn.: *K. cristata* (L.) Pers., *K. cristata* Pers., *K. macrantha* (Ledeb.) Schult., *K. obtusata* Torr., *K. truncata* Torr., *K. tuberosa* Pers., *Aira cristata* Sm., *A. obtusata* Michx., *A. obtusata* Torr.

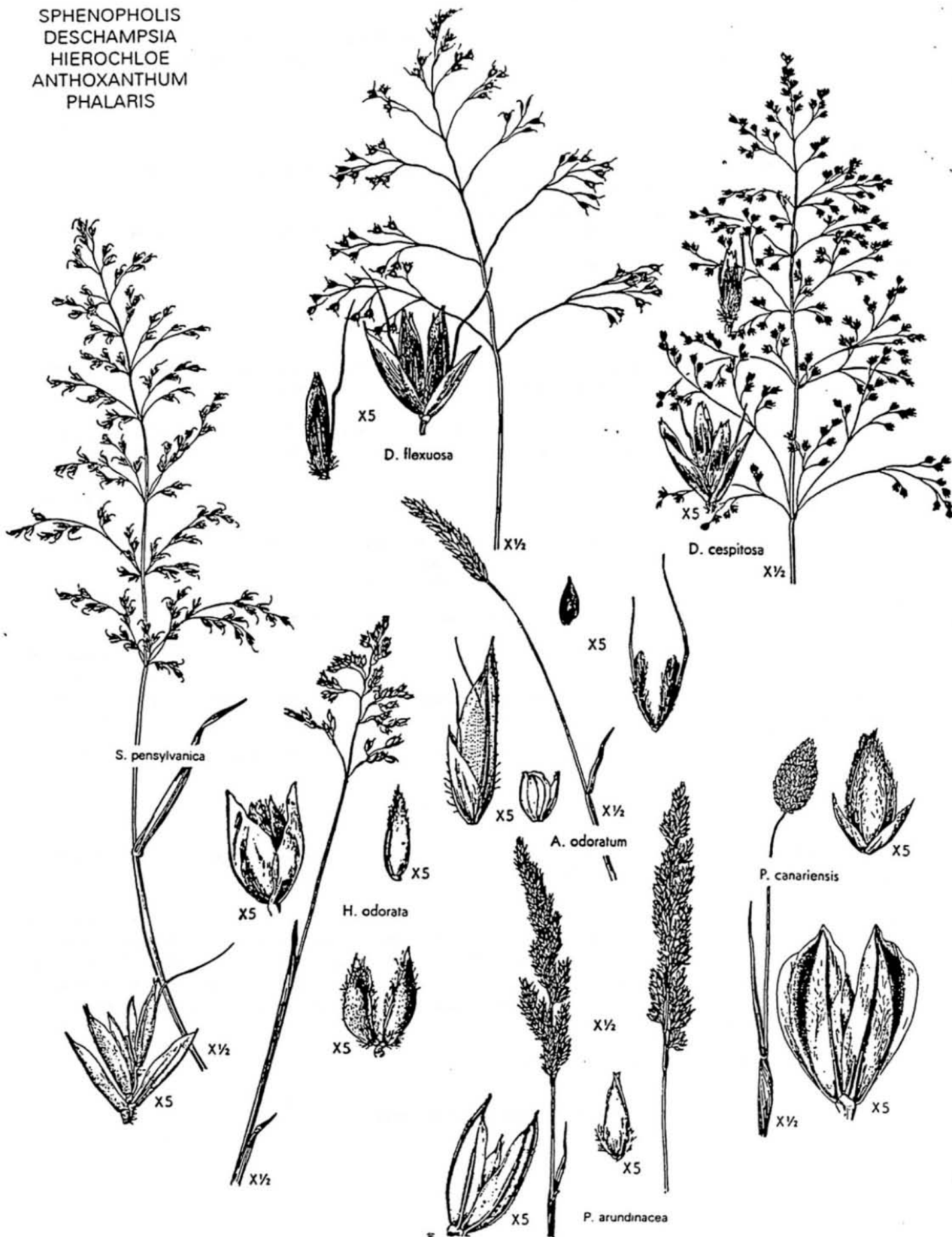
REFERENCES: Sullivant 1840:49, 61-62; Selby & Craig 1890:18.

HERBARIUM RECORD: 1840—Cols., *Sullivant*.

NOTE: Not mapped for Franklin Co. by Braun 1967:102 (illus. p. 104).

19. *SPHENOPHOLIS* Scribn.

SPHENOPHOLIS  
DESCHAMPSIA  
HIEROCHLOE  
ANTHOXANTHUM  
PHALARIS



Tufted; panicles rather narrow, shining; spikelets usually 2-flowered, rarely 3-flowered; first glume narrow, second obovate; lemma almost nerveless, awned or awnless; joint in pedicel some distance below glumes, spikelet or just lower floret, glumes, and segment of pedicel falling as a unit.

a Lower lemma awnless, upper lemma with outwardly curved awn; spikelet and a length of pedicel falling together.

3. *S. pensylvanica*

a' Lemmas awnless; second glume much wider than first; upper floret falling early from lower floret and glumes.

b Panicle dense, erect, spikelets crowded; second glume about as wide as long, tip rounded, somewhat cucullate, with broad papery margin. 1. *S. obtusata* var. *obtusata*

b' Panicle lax but narrow, often nodding; second glume 2/5-2/3 as wide as long, not cucullate.

c First glume (folded) subulate, usually shorter than second glume; lemma glabrous; lower sheaths and blades usually glabrous. 1. *S. obtusata* var. *major*

c' First glume (folded) linear-lanceolate, about equaling second glume; at least upper lemma scabrous-papillose; lower sheaths and blades usually hairy. 2. *S. nitida*

1. *Sphenopholis obtusata* (Michx.) Scribn.

Wedge Grass

Spikelets containing two bisporangiate florets; glumes shorter than lemma just above; articulation below glumes; lemmas awnless; first glume narrow, second glume wider.

Two varieties are recognized:

†var. *obtusata*

Prairie Wedgegrass

Panicle dense, erect; second glume rounded at tip, about as wide as long, somewhat hood-shaped, with papery margins. Syn.: *Eatonia obtusata* A.Gray

REFERENCE: Selby & Craig 1890:17.

HERBARIUM RECORD: 1840—Cols., *Sullivant*.

NOTE: Not mapped for Franklin Co. by Braun 1967:103 (open woods, prairies) (illus. p. 104).

var. *major* (Torr.) Erdman

Panicle narrow, lax to nodding; first glume awn-shaped, usually shorter than second glume; second glume obovate 2/5-2/3 as wide as long. Syn.: *S. intermedia* Rydb., *Eatonia pensylvanica* A.Gray

REFERENCES: Selby & Craig 1890:17; Selby 1891a:111a (#976 Re-collected); Werner 1893: 93 (#976 Re-collections, Cols., *Werner*); Braun 1967:103 (moist places, often in woods) (illus. p. 104).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 25 Jun 1893—Cols., *Werner* (CLM); 26 Jun 1893—Cols., *Werner*; 20 May 1902—Big Darby, *W. Kellerman*; 6 Jun 1980—few large clumps in sand and cinder RR bed along tracks S of Goodale Ave., at end of Northwest Blvd., NE ¼ SW Cols. Quad., *W. Carr* 2888.

2. *Sphenopholis nitida* (Biehler) Scribn.

Lower sheaths and blades hairy; first glume linear-lanceolate, about as long as second glume; lemmas awnless, upper lemma scabrous; articulation below glumes; upper floret falling early from lower floret and glumes.

REFERENCE: Selby 1892a:111 (*Eatonia dudleyi* Vasey).

HERBARIUM RECORD: 30 May 1993—Hoover Dam Park, S of Walnut St., old bluff of Big Walnut Creek, W side of Cabbage Rd., Blendon Twp., *Lowden* 5054.

NOTE: Not mapped for Franklin Co. by Braun 1967:103 (illus. p. 104).

3. †*Sphenopholis pensylvanica* (L.) Hitchc.

Swamp-Oats

Spikelets 2-flowered, rarely 3-flowered; articulation below glumes, pedicel jointed, spikelet and a length of pedicel falling together; first glume 3-nerved, the second wider, 3-5 nerved; lemmas acuminate or acute, the lower usually awnless, the second with an outwardly-curved awn about 5 mm long from below the 2-toothed apex; palea 2/3 to 3/4 the length of lemma body; panicle lax, narrow. Syn.: *S. palustris* (Michx.) Scribn., *Trisetum pensylvanicum* (L.) P.Beauv.

HERBARIUM RECORD: 1840—Cols., *Sullivant*.

NOTE: Not mapped for Franklin Co. by Braun 1967:105 (swamps and other wet places) (illus. p. 104).

20. *DESCHAMPSIA* P.Beauv. Hair Grass

Plants with dense tufts of narrow basal leaves; spikelets 2-flowered, shining, in open panicles; glumes sometimes unequal, the shorter usually not overtopping the upper floret; rachilla prolonged behind palea of upper floret; lemma short-toothed or erose at tip, faintly 5-nerved, midnerve becoming the awn; callus bearded.

- a Blades filiform, flexuous; awn twisted below, extending beyond tip of lemma; rachilla-extension inconspicuous.  
1. *D. flexuosa*
- a' Blades narrow but not filiform; awn nearly straight, usually not exerted, rachilla-extension conspicuous.  
2. *D. caespitosa*

1. †*Deschampsia flexuosa* (L.) Trin. Crinkled Hair Grass, Common Hair Grass  
Blades filiform; awn twisted, long exerted beyond tip of lemma; rachilla-extension inconspicuous.  
HERBARIUM RECORD: 1840—Cols., *Sullivant*.  
NOTE: Not mapped for Franklin Co. by Braun 1967:106 (illus. p. 104).

2. †*Deschampsia caespitosa* (L.) P.Beauv. Tufted Hair Grass  
Spikelets containing two or more bisporangiate florets; lemma awned about middle of back or below; articulation above glumes; panicle open, spreading; glumes unequal, the shorter usually not overtopping the upper floret; rachilla prolonged behind palea; lemma short-topped or erose at tip. Blades narrow; awn minute, straight, not exerted; rachilla-extension conspicuous. Syn.: *Aira caespitosa* L.  
HERBARIUM RECORD: 1840—Cols., *Sullivant*.  
NOTE: *Sullivant* 1840:48 and Selby & Craig 1890:17 reported on plants collected in adjacent counties. Not mapped for Franklin Co. by Braun 1967:106.

## 21. HIEROCHLOE R.Br. Vanilla Grass

Fragrant perennial; blades of flowering culm short; inflorescence an open panicle; spikelet about 5 mm long, tawny, shining, with 1 perfect floret above and 2 staminate florets below; glumes broad, thin; lemma awnless, of staminate flowers about as long as glumes, of perfect flower shorter.

1. *Hierochloa odorata* (L.) P.Beauv. Sweet or Vanilla Grass  
Spikelet containing 1 perfect floret between 2 staminate florets; articulation above glumes; glumes almost equal; glumes and lemma about equal. Syn.: *H. borealis* Roem. & Schult.  
REFERENCES: Selby & Craig 1890:18; Braun 1967:137 (illus. p. 136).  
HERBARIUM RECORDS: [ca. 1834]—Cols., *Lapham* (CINC); 1840—Cols., *Sullivant*; 26 May 1891—Cols., *Werner* (CLM, OS).  
NOTE: *Sullivant* 1840:46 reported on plants collected in adjacent counties. Selby & Craig 1890:18 also cited *Poa brevifolia* Muhl. which might belong here based on Lapham's specimen label (CINC).

## 22. ANTHOXANTHUM L. Vernal Grass

Plants fragrant; inflorescence a spikelike panicle; spikelets 7-10 mm long, with 1 perfect floret above and 2 rudimentary lemmas below; glumes unequal, with wide hyaline margins; lemma of perfect floret indurate, awnless, brown, shorter than the brown-hairy awned rudiments.

1. \**Anthoxanthum odoratum* L. Sweet Vernal Grass  
Adventive (native of Europe)  
Perennial; culms erect, unbranched; spikelets not in rows, each containing one bisporangiate floret between and exceeded by 2 brown hairy awned scales; articulation above the unequal glumes; panicles spikelike.  
HERBARIUM RECORDS: [ca. 1830s]—Cols., cult., *M. Williams Collection* (URB); 1840—Cols., *Sullivant*; 1892—Cols., *Werner* (KE, OS).  
NOTE: Not mentioned for Franklin Co. by Braun 1967:137 (illus. p. 136).

## 23. PHALARIS L. Canary Grass

Spikelet laterally flattened, with 1 perfect floret, at base of which are small scalelike rudiments of 2 lemmas; glumes equal, boat-shaped, keeled, keel sometimes winged; lemma of perfect flower coriaceous, shining, shorter than glumes.

- a Panicle 7 cm long or more, narrow and dense but with obvious branches; keels of glumes wingless or narrowly winged; perennial, with rhizomes. 1. *P. arundinacea*



a' Panicle dense and spikelike, usually 5 cm long or less, ovoid or ovoid-oblong; keels of glumes broadly winged, a prominent green stripe on each side of keel; annual. 2. *P. canariensis*

1. *Phalaris arundinacea* L.

Reed Canary Grass

Spikelet containing one bisporangiate (perfect) floret subtended by 2 hairy vestiges or lemma-scales; glumes slightly unequal, longer than lemma. Spikelet about 5 mm long; glumes narrowly winged along the upper half; panicles 10 cm long or more, narrow, dense and branched. Ditches, marshes & river banks.

REFERENCES: Sullivant 1840:46; Selby & Craig 1890:18.

HERBARIUM RECORDS: 1840—Cols., Sullivant; [ca. 1840]—Cols., Sullivant (URB); 10 Oct 1891—Georgéville, Werner (CLM); 11 Jun 1967—ditch in field, NW side I-71, 1¼ mi. N of Rt. 665, Jackson Twp., E. Herrick; 25 Jun 1977—Pickerington Marsh, intersection of Wright Rd. & Bowen Rd., 3 mi. W of Pickerington & 3 mi. N of Canal Winchester, Sect. 18, Madison Twp., Sect. 17, Violet Twp., Franklin/Fairfield Co. Line, Eu. Wright; Summer 1988—along the Olentangy R., OSU campus, Cols., Delong; 10 Jun 1990—roadside, Havens Rd., just W of Darling Rd., Jefferson Twp., Lowden 4394; 13 Jun 1990—roadside ditch, Kennedy Rd., ½ mi. E of Waggoner Rd., Jefferson Twp., Lowden 4412; 7 Jun 1991—Boyer Park, end of Park St., E of Rt. 3, Westerville, Blendon Twp., Lowden 4660; 5 Jul 1991—E bank of Olentangy R., between Lane Ave. & King Ave. bridges, Cols., Clinton Twp., Lowden 4767.

NOTE: Not mapped for Franklin Co. by Braun 1967:138 (illus. p. 136).

2. \**Phalaris canariensis* L.

Canary Grass

Adventive (native of Europe)

Panicle about 3 cm long, dense and spikelike, ovoid-oblong; glumes 7-8 mm long, broadly keeled above with a green strip on each side of keel.

REFERENCE: Selby 1891a:111a.

HERBARIUM RECORD: 10 Jul 1930—near N&W RR on E. 5th Ave., Cols., M. & S. Humphrey.

NOTE: Not mentioned for Franklin Co. by Braun 1967:138 (infrequent along roadsides and in waste places).

24. CALAMAGROSTIS Adans. Reed Grass

Panicle open or narrow; rachilla prolonged behind the single floret into a usually hairy bristle; glumes about equal, usually longer than lemma; lemma faintly 5-nerved, with delicate dorsal awn, callus with abundant white hairs.

1. *Calamagrostis canadensis* (Michx.) P.Beauv.

Bluejoint

Spikelet containing one bisporangiate floret; glumes present at least ¼ as long as lemma; hairs of callus of lemma abundant about equaling lemma; awn of lemma delicate, attached at about middle; tip of lemma translucent; rachilla prolonged behind palea, long-hairy throughout; panicle open. "Bogs, wet meadows, swamps, sometimes woods."

REFERENCES: Sullivant 1840:48; Selby & Craig 1890:17; Braun 1967:111 (illus. p. 118).

HERBARIUM RECORDS: 1834—Cat tail swamp [3 mi. W of Cols.], Sullivant (ILL); 1840—Cols., Sullivant (OS, URB); 7 Sep 1907—Cols., W. Kellerman.

25. AGROSTIS L. Bent Grass

Culms often slender; ligule membranous; panicle usually open, often delicate; spikelet 1-flowered; glumes membranous; lemma awned or awnless, rarely 2-toothed at apex, usually shorter and thinner than glumes; palea often minute or wanting.

a Palea 1/2-2/3 as long as lemma, 2-nerved; ligule 2-6 mm long; some of the several panicle-branches at each node spikelet-bearing to base; panicle often red. 1. *A. gigantea*

a' Palea wanting or minute and nerveless.

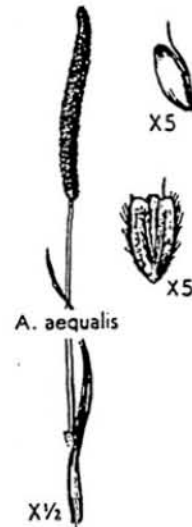
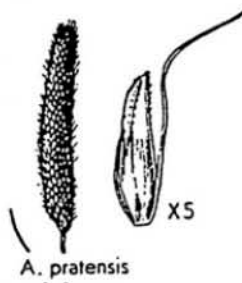
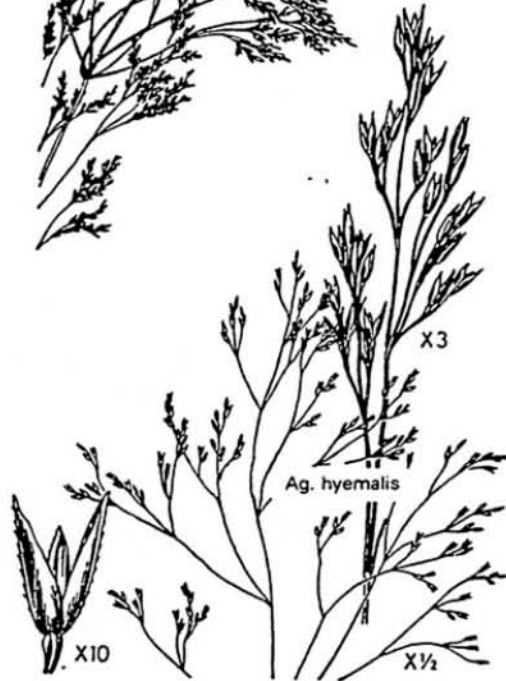
b Panicle open, longer than wide, branches slender slightly rough when rubbed downward, forking at or below middle; spikelet 2-3 mm long; flowering Aug. and Sept. 2. *A. perennans*

b' Panicle diffuse, the capillary branches, very rough when rubbed downward, forking above middle, bearing spikelets only near tips. 3. *A. hyemalis*,

c Spikelet to 1.7 mm long; lemma to 1.2 mm long, hardly longer than grain; spikelets in small clusters; flowering May and June, var. *hyemalis*

c' Spikelets 2-2.7 mm long, not clustered; lemma 1.5 mm long or more, longer than grain; flowering June and July, var. *scabra*

CALAMAGROSTIS  
AGROSTIS,  
CINNA  
ALOPECURUS



1. *\*Agrostis gigantea* Roth

Redtop

Naturalized (native of Europe)

Spikelet with 1 bisporangiate floret; inflorescence not spike-like, articulation above glumes; palea not longer than lemma, absent or not more than 2/3 as long as lemma; ligule 2-6 mm long; panicle often red. Cultivated; old meadows & dry fields. Syn.: *A. alba* L., misapplied, *A. alba* L. var. *vulgaris* Thunb., *A. polymorpha* Huds., *A. vulgaris* Sm.

REFERENCES: Sullivant 1840:47, 61 (naturalized plants); Craig 1890:109 (very common in fields; grows very luxuriantly along the brook S of the botanical bldg.); Selby & Craig 1890:17; Selby 1891a:111a; Kellerman & Werner 1893:231.

HERBARIUM RECORDS: 1838—Worthington, *J. Paddock Collection* (ILL); Jul 1891—Cols., *Werner* (CLM); 29 Aug 1891—Georgesville, *Werner*; Jul 1892—Cols., *Werner* (CLM); Spring 1914—Cols., cult., *J. H. Schaffner*; 20 Jun 1939—Cols., *Dore*; 15 Jul 1939—Cols., *Dore*; [ca. 1982]—Blendon Woods, *Owens*; 24 Aug 1992—Sharon Woods Metro Park, open field just N of Schrock Lake, Sharon Twp., *Watts 659*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:114 (common in Ohio ... meadows, pastures, and lawns) (illus. p. 112).

2. *Agrostis perennans* (Walter) Tuck.

Autumn Bent Grass

Panicle open, longer than wide, branches slightly rough when rubbed downward, forking at or below middle; spikelet 2-3 mm long. "Woods & open ground." Aug & Sep.

REFERENCES: Sullivant 1840:48 (*Trichodium laxiflorum* Michx., Hair Grass); Selby & Craig 1890:17; Braun 1967:115 (illus. p. 112).

HERBARIUM RECORDS: [ca. 1834]—Cols., [I. A. Lapham] (URB); 18 Aug 1839—4 mi. W of Worthington, *J. Paddock Collection* (ILL); 13 Sep 1890—Cols., *Werner*; 14 Sep 1890—N Cols., *E. V. Wilcox*; 29 Aug 1891—Georgesville, *Werner*; 5 Sep 1891—Georgesville, *Werner*; 7 Oct 1905—High Banks, *Fischer*; 13 Sep 1934—Cols., *E. Thomas*.

NOTE: I placed the Sullivant reference here based on the [Lapham] specimen.

3. *Agrostis hyemalis* (Walter) Britton, Sterns & Poggenb.

Bent Grass

Panicle diffuse; branches rough when rubbed downward, forking above middle, bearing spikelets in small clusters near tips.

Two varieties are recognized:

var. *hyemalis*

Spikelet to 1.7 mm long, lemma to 1.2 mm long; flowering May & Jun. Gardens & fields.

REFERENCE: Braun 1967:114.

HERBARIUM RECORDS: Summer 1959—Cols., *Blaydes*; 30 May 1964—Truro Twp., *Weishaupt*; 9 May 1988—Highbanks Metro Park (Delaware Co.), dry oak woods, *Watts 414*.

var. *scabra* (Willd.) Blomq.

Similar to *Agrostis hyemalis* var. *hyemalis* except spikelets 2-2.7 mm long, not clustered; lemma 1.5 mm long or more, flowering Jun & Jul. Vacant lot. Syn.: *A. hyemalis* (Walter) Britton, Sterns & Poggenb. var. *tenuis* (Tuck.) Gleason, *A. scabra* Willd., *Trichodium scabrum* Muhl.

REFERENCES: Sullivant 1840:48; Selby & Craig 1890:17; Braun 1967:115 (illus. p. 112).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 30 Jun 1963—OSU campus, W of Chemical Abstracts Bldg., Cols., *Cusick*.

## 26. CINNA L. Wood Reed

Ligule hyaline, conspicuous; spikelet 1-flowered; floret stipitate; glumes keeled; lemma with short straight awn from below apex; palea 1-keeled; articulation below glumes.

1. *Cinna arundinacea* L.

Common Wood Reed

Spikelets containing one bisporangiate floret; articulation below the glumes; lemma with a minute straight awn just below tip; glumes at least 1/4 as long as lemma, second glume 3-nerved, hyaline margins narrow; panicle dense, silvery-green, branches ascending. Borders of swampy areas.

REFERENCES: Sullivant 1840:48; Selby & Craig 1890:17; Kellerman & Werner 1893:23 (common along the river and around the lagoons, Aug 1890); Braun 1967:116 (illus. p. 112).

HERBARIUM RECORDS: 1837—Worthington, *J. Paddock Collection* (ILL); 1840—Cols., *Sullivant*; 11 Aug 1890—Olentangy R., Cols., *Hine*; 13 Aug 1890—Cols., *Werner* (CLM); 5 Sep 1891—Cols., *Werner* (CLM); 11 Oct 1905—Olentangy R., *Fischer*; 19 Aug 1907—Cols., *W. Kellerman*; 6 Nov 1984—Gahanna Wood State Nature Preserve, SW corner of the Preserve (V), *Tyrrell*; 3 Aug 1990—open to woody area S side of McOwen Rd. just W of Dixon Rd., Jefferson Twp., *Lowden 4502*; 10 Sep 1991—Big Darby Creek off Rt. 40, Prairie Twp., *Lowden 4810*; 21 Aug 1992—Battelle-Draby Creek Metro Park, floodplain forest along Big Darby Creek, W of Cedar Ridge picnic area, Pleasant Twp., *Watts 633*.

## 27. ALOPECURUS L. Foxtail

Panicle dense, spikelike; spikelet 1-flowered, flattened laterally; glumes equal, keeled, keels usually pubescent; lemma wide, obtuse or truncate, as long as glumes, 5-nerved, dorsally awned, margins united at base; palea none; articulation below glumes.

- a Spikelet 4-7 mm long; anthers 2-3 mm long; awn bent.
- b Inflorescence usually more than 5 mm thick; glumes long-villous on keel and pubescent on nerves.
  - 1. *A. pratensis*
- b' Inflorescence usually not more than 5 mm thick; glumes short-pubescent or scabrous on keel and nerves.
  - 2. *A. myosuroides*
- a' Spikelet 2-3 mm long; anthers 1 mm long or less; awn exerted beyond glumes not more than 1 mm, or included, straight, attached near middle of lemma; perennial. 3. *A. aequalis*

1. \**Alopecurus pratensis* L.

Meadow Foxtail

Adventive (native of Eurasia)

Similar to *Alopecurus myosuroides*; inflorescence more than 5 mm thick, glumes long-villous on keel. Cultivated to escape in wet ditches.

HERBARIUM RECORDS: 6 Jun 1898—OSU Farm, *W. Kellerman*; Spring 1914—Cols., *J. H. Schaffner*; 6 May 1937—OSU campus, Cols., *Dobbins*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:117.

2. \**Alopecurus myosuroides* Huds.

Foxtail

Adventive (native of Eurasia)

Spikelet 4-7 mm long; anthers 2-3 mm long; awn bent. Inflorescence not more than 5 mm thick; glumes short-pubescent or scabrous on keel. Farms (accidental).

REFERENCE: Braun 1967:117.

HERBARIUM RECORD: 20 May 1932—OSU Farm, *Willard*.

3. †*Alopecurus aequalis* Sobol.

Floating Foxtail

Spikelet with 1 bisporangiate floret, staminate & vestigial flowers absent; inflorescence cylindrical, dense and spikelike; lemma equaling glumes, awned from back; glumes equal. Spikelet 2-3 mm long; anthers about 1 mm long; awn exerted beyond glumes not more than 1 mm, or included, straight, attached near middle of lemma, perennial.

Wet places. Syn.: *A. geniculatus* L., *A. geniculatus* var. *aristulatus* Torr.

REFERENCES: Sullivant 1840:46; Selby & Craig 1890:17 (introduced); Selby 1891a:111a; Kellerman & Werner 1893:231; Braun 1967:117.

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; [ca. 1840]—Cols., *Sullivant* (URB); May 1891—Worthington, *Selby* (WOOS); 16 May 1891—Cols., *Werner* (CLM, OS); 16 May 1891—Worthington Big Woods, *Werner*; 17 May 1891—Cols., *Werner* (CLM); 9 Jul 1892—Cols., *Bogue*; 12 Jun 1930—Mifflin Twp., *S. & M. Humphrey*.

## 28. PHLEUM L. Timothy

Stem unbranched, the base bulbous; panicle dense and spikelike; spikelet 1-flowered; glumes membranous, truncate, keeled, the keel pectinate-ciliate, awn about 1 mm long; lemma shorter than glumes, hyaline, broad, truncate, unawned.

1. \**Phleum pratense* L.

Timothy

Naturalized (native of Eurasia)

Spikelets containing one bisporangiate floret; glumes equal, awned (awns 1 mm long or more), keel pectinate-ciliate and glumes longer than lemma. Panicle dense and spikelike, stem unbranched. Wasteland, meadows and fields.

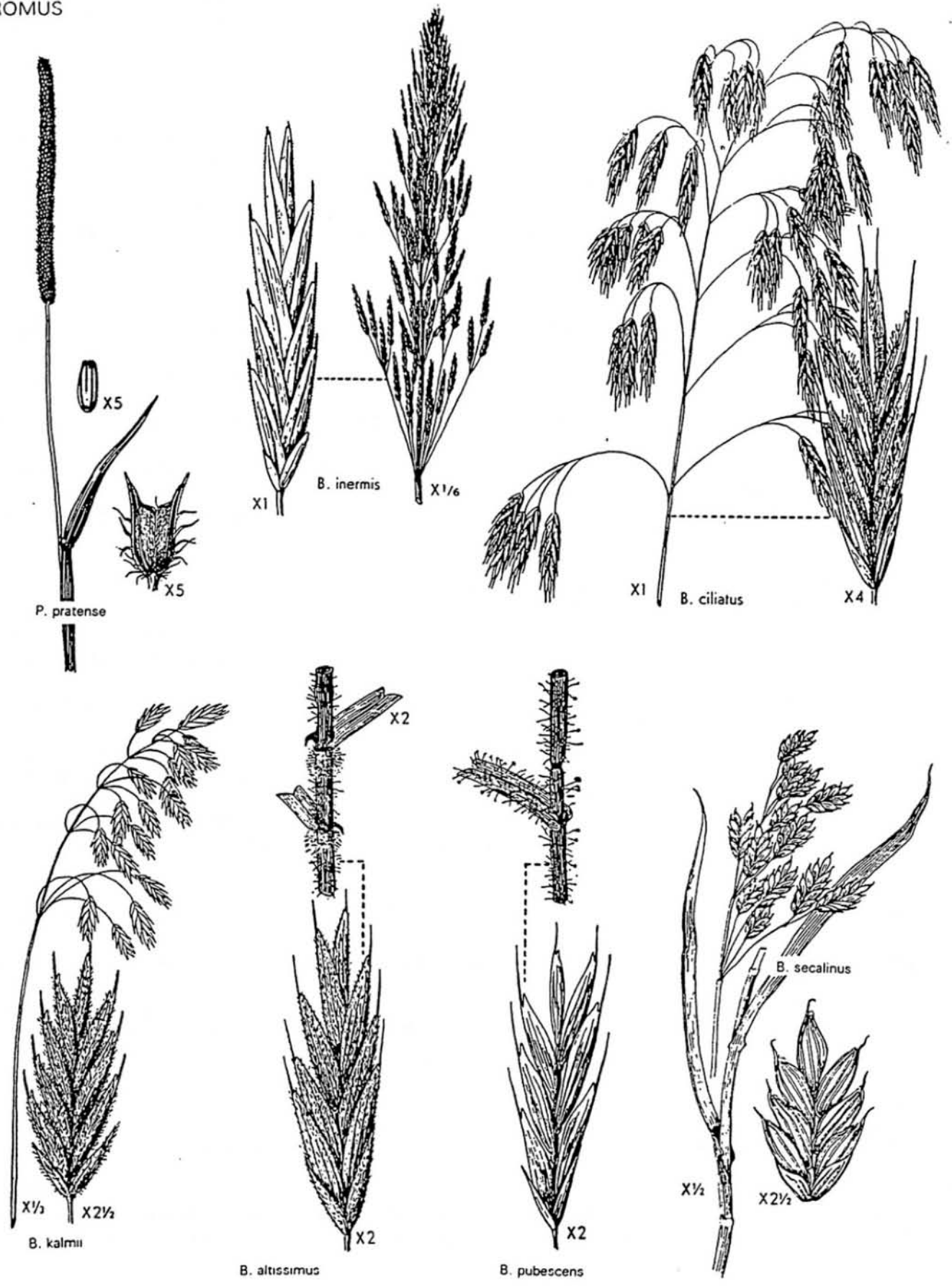
REFERENCES: Sullivant 1840:47 (naturalized plants); Craig 1890:54, 56, 109 (#456; University Farm Sep 1887, 3 Nov 1888; very abundant everywhere in fields and pastures, 11 Jun 1887); Selby & Craig 1890:18.

HERBARIUM RECORDS: 26 Jun 1890—Cols., *E. Evans*; 18 Jun 1892—Cols., *Selby* (WOOS); 11 Jul 1892—Cols., *Bogue*; Oct 1898—Cols., *J. H. Schaffner*; 6 Nov 1898—Cols., *W. Kellerman*; 11 Jul 1939—waste land, Cols., *Dore*; 29 Jun 1986—fields, Big Meadows, Highbanks Metro Park (Delaware Co.), *Morawetz*; 13 Jun 1990—Gahanna Woods Park, just W of Taylor Station Rd., Jefferson Twp., *Lowden* 4395; 22 Jul 1991—Antrim Park, S edge of lake, Sharon Twp., *Lowden* 4777.

NOTE: Not mentioned for Franklin Co. by Braun 1967:117 (our most important hay grass).

## 29. BROMUS L. Brome Grass

PHLEUM  
BROMUS



Sheaths closed; spikelets 1-4 cm long, of several to many florets, in panicles or rarely racemes; lemma about 1 or 2 cm long, awned from below 2-toothed apex or rarely awnless; stigmas inserted below tip of ovary.

Actual length of lemma-teeth is hard to ascertain because base of notch between them is covered by awn; in this key, teeth are considered to extend to base of awn.

- a First glume 1-nerved, second glume 3-nerved; length of lemma 2½ times width or more.
- b Lemma-teeth not more than 0.6 mm long; lemma awnless or awn shorter than body.
  - c Panicle erect, branches whorled, spreading in flower, ascending in fruit; foliage, except sometimes lower sheaths, and lemma usually glabrous; lemma awnless or awn to 3 mm. 1. *B. inermis*
  - c' Panicle branches spreading and usually drooping at maturity, spikelets near ends of branches only; sheaths or blades or both usually pubescent; lemma usually pubescent, at least near base and margin.
  - d Nodes 10 or more, all except sometimes the upper, covered by sheaths; flange and auricles at base of blade prominent; flowering Aug. and Sept. 4. *B. altissimus*
  - d' Nodes usually fewer than 10, not covered by sheaths except sometimes the lower; flange and auricles absent at base of blade.
    - e Lemma more or less evenly pubescent all over or rarely glabrous; flowering June and July. 5. *B. pubescens*
    - e' Lemma with band of long hairs on each margin, at least below middle, remainder of surface glabrous; nodes of culm usually pubescent; flowering in July. 2. *B. ciliatus*
- b' Lemma-teeth slender and pointed, to 2 mm long or more; lemma narrowly lanceolate, awn equaling or longer than body; weedy grasses of open places.
  - f Inflorescence a panicle, branches of axis or most of them again branched; awn of lemma 1-1.5 cm long. 9. *B. tectorum*
  - f' Inflorescence racemelike, branches of axis or most of them not again branched; awn of lemma 2-3 cm long. 10. *B. sterilis*
- a' First glume 3-5-nerved, second glume 5-9-nerved.
  - g Lemma pubescent, teeth minute, more than twice as long as wide. 3. *B. kalmii*
  - g' Lemma glabrous or scabrous, teeth 0.5-2 mm long, about as long as wide.
  - h Sheaths glabrous or the lower slightly hairy; tip of palea and hairy tip of grain usually projecting slightly beyond tip of lemma at maturity; awn usually short, sometimes crimped; anthers 2 mm long or less. 6. *B. secalinus*
  - h' Sheaths, except sometimes the upper, hairy; palea not exceeding lemma; lemma obviously longer than wide, awn well developed.
    - i Lower sheaths soft-villous, hairs somewhat entangled; awn at maturity usually divaricate; palea 1-2 mm shorter than lemma; anther about 1 mm long; panicle diffuse, branches divergent. 8. *B. japonicus*
    - i' Lower sheaths pubescent, sometimes sparsely, less soft, usually shorter, less dense, not entangled; awn not divaricate at maturity usually shorter than body of lemma; palea little shorter than lemma; anther 2 mm long or less; lower lemmas of spikelet 9-11 mm long, teeth of lemma broad and obtuse; panicle not diffuse. 7. *B. commutatus*

1. *\*Bromus inermis* Leys.

Smooth Brome, Hungarian Brome

Naturalized (native of Europe)

First glume 1-nerved, second glume 3-nerved; panicle erect; lemma short awned, teeth not more than 0.6 mm long. Meadows, waste places and roadsides.

HERBARIUM RECORDS: Sep 1933—Franklin Co., *Weishaupt*; 5 Jun 1934—OSU campus, Cols., *Weishaupt*; 6 Jun 1934—OSU campus, Cols., *J. H. Schaffner* (KE, OS); 27 Jun 1939—Cols., *Dore*; 1 Jun 1982—Cooper Rd., [Blendon Twp.], *Owens*; 13 Jun 1990—roadside ditch along open field, Kennedy Rd., ½ mi. E of Waggoner Rd., Jefferson Twp., *Lowden 4413*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:69 (common in Ohio).

2. *Bromus ciliatus* L.

Fringed Brome

REFERENCES: Sullivant 1840:49 (& *Bromus pubescens* Muhl.); Selby & Craig 1890:17.

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Braun 1967:69. Sullivant was somewhat doubtful as to identity.

3. *Bromus kalmii* A.Gray

Brome Grass

First glume 3-5 nerved, second glume 5-9 nerved; lemma pubescent, more than twice as long as wide, teeth minute; panicle drooping, branches slender and flexuous; awn 2-3 mm long. Bluffs, open ground or open woods.

REFERENCES: Selby & Craig 1890:17; Braun 1967:69 (illus. p. 70).

HERBARIUM RECORDS: 1 Jul 1891—Georgesville, *Werner* (CLM, OS); Jul 1892—Franklin Co., *Werner*; Jul 1892—Georgesville, *Werner* (CLM); 29 Jun 1929—Big Darby Creek, *E. Thomas*; 5 Jul 1979—W-facing clay bluff above Big Darby Creek, Darby Creek Metro Park, W., Alkire Rd. & Koekel-Suydam Rd., Pleasant Twp., Galloway Quad., *Cusick* 19461.

4. †*Bromus altissimus* Pursh

Brome Grass

First glume 1-nerved, second glume 3-nerved; nodes covered by sheaths; flange and auricles at base of blade prominent. Moist woods, along streams. Syn.: *B. latiglumis* (Shear) Hitchc.

REFERENCE: Braun 1967:69 (illus. p. 70).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; Jul 1888—Cols., *Craig*; 31 Jul 1890—Cols., *Hine*; 20 Aug 1890—Franklin Co., *Werner*.

NOTE: Specimens are more the typical form having sheaths pilose at summit, glabrous or somewhat pilose below.

5. *Bromus pubescens* Muhl.

Brome Grass

Spikelets near ends of panicle branches; first glume 1-nerved, second 3-nerved; lemma awn shorter than body; nodes usually fewer than 10, usually not covered by sheaths; flange and auricles absent at base of blade. Lemma more or less evenly pubescent all over. Dry woods & ravines. Syn.: *B. purgans* L., misapplied

REFERENCES: Sullivant 1840:49; Braun 1967:69 (illus. p. 70).

HERBARIUM RECORDS: Jul & 1 Jul 1891—Georgesville, *Werner*; Jul 1892—Franklin Co., *Werner*; 30 Jun & 30 Jul 1906—Big Darby, *W. Kellerman*; 21 Aug 1907—Cols., *W. Kellerman*; 15 Jul 1939—Cols., *Dore*; 2 Jun 1991—Hoover Dam Park, W of Cabbage Rd., woody area, Blendon Twp., *Lowden* 4649.

6. \**Bromus secalinus* L.

Cheat, Chess

Adventive (native of Europe)

First glume 3-5 nerved, second glume 5-9 nerved; lemma glabrous, teeth 0.5-2 mm long, awn wavy; tip of palea usually projecting slightly beyond the lemma.

REFERENCES: Sullivant 1840:49 (naturalized plants); Craig 1890:109 (common along the river and elsewhere); Selby & Craig 1890:17 (introduced); Kellerman & Werner 1893:227.

HERBARIUM RECORD: 31 May 1896—Cols., *E. M. Wilcox*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:71 (common in Ohio, weed in waste places and in wheat and other grain fields).

7. \**Bromus commutatus* Schrad.

Brome Grass, Hairy Chess

Naturalized (native of Europe)

Sheaths closed; spikelets 1-2 cm long, of several to many florets, in panicles; lemma awned from below the 2-toothed apex. First glume 3-5 nerved, second 5-8 nerved; lemma about 8-10 mm long, glabrous, awn shorter than body of lemma; sheaths hairy; palea not exceeding lemma. Wasteland & dry plowed fields.

REFERENCES: Selby & Craig 1890:17; Kellerman & Werner 1893:231 (#464a frequent on the farm, Jun 1891).

HERBARIUM RECORDS: 6 Jul 1892—OSU, Cols., *Werner*; 15 Jun 1895—Cols., *W. Kellerman*; Spring 1914—Cols., *J. H. Schaffner*; 11 Jul 1939—Cols., *Dore*; 29 May 1977—W campus, OSU, Cols., *W. Carr* 253; 13 Jun 1990—Gahanna Woods Park, W of Taylor Station Rd., Jefferson Twp., *Lowden* 4396.

NOTE: Specimens dated 1892 & 1977 have sheaths with soft-villous hairs, which are more like *Bromus japonicus* with palea and anthers 1 mm long. The above references belong here, even though they referred to *Bromus racemosus* L., which is considered a separate species, with no Ohio records. Not mentioned for Franklin Co. by Braun 1967:71 (general in Ohio).

8. \**Bromus japonicus* Thunb.

Japanese Brome or Chess

Naturalized (native of the Old World)

First glume 3-5 nerved, second glume 5-9 nerved; lemma longer than wide; palea 1-2 mm shorter than lemma; anther about 1 mm long; awn at maturity usually divaricate; lower sheaths soft-villous. Common weed, frequent on open riverbanks, in waste places & along roadsides.

HERBARIUM RECORDS: 14 Jun 1913 & Spring 1914—Cols., *J. H. Schaffner*; 27 & 30 Jun 1939—Cols., *Dore*; 17 Jun 1940—Franklin Co., *D. Brown*; 11 Jun 1987—E bank of the Olentangy R., between the Lane Ave. & Dodrige St. bridges, in Tuttle Park, Cols., *T. Lammers* 6124; 30 May 1990—open woody field border, N side of Orders Rd., 0.5 mi. W of Hoover Rd., Jackson Twp., *Lowden* 4362; 11 Jun 1990—locally common; nearly barren berm, jct. of Rt. 161 & Maple Canyon Rd., NE Cols. Quad., *Cusick* 28938.

NOTE: Not mentioned for Franklin Co. by Braun 1967:71 (general in Ohio).

9. \**Bromus tectorum* L.

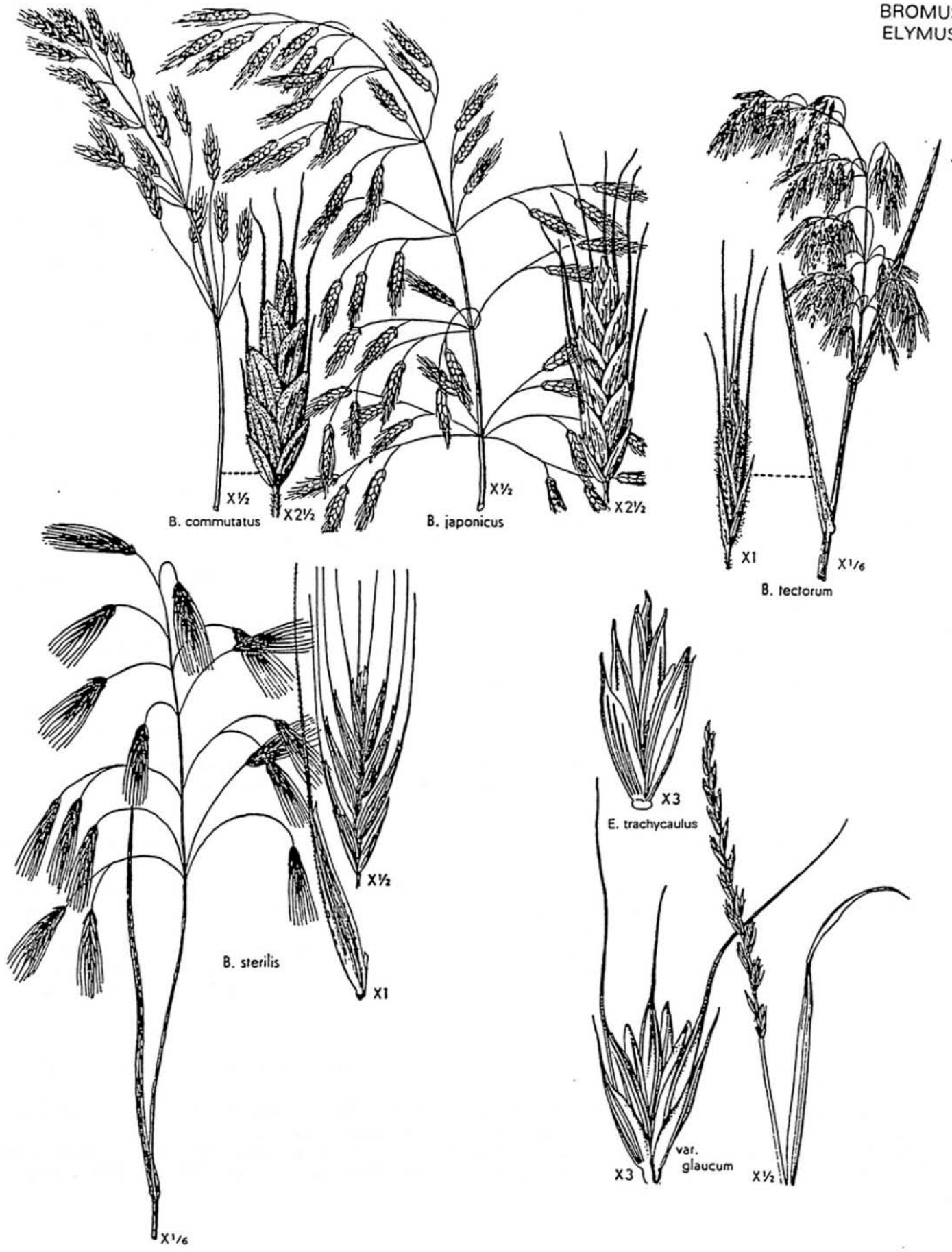
Downy Brome Grass, Downy Chess, Junegrass

Naturalized (native of Europe)

First glume 1-nerved, second glume 3-nerved; lemma teeth 2 mm long or more; awn 1-1.5 cm long, equaling or longer than body of lemma; inflorescence a panicle, branches often again branched.

HERBARIUM RECORDS: 23 May 1895—Cols., *W. Kellerman*; 28 Jun 1902—Cols., *J. H. Schaffner*; Spring 1914—Cols., *J. H. Schaffner*; 23 May 1989—Overbrook Dr. Ravine, E of N. High St. & S of Cooke Rd., Beechwood area, Clinton Twp., Cols., *Lowden* 4088; 14 Jun 1989—parking area between B&Z & Biol. Sci. Bldg., OSU campus, *Lowden* 4162.

BROMUS  
ELYMUS





NOTE: Not mentioned for Franklin Co. by Braun 1967:69 (abundant in Ohio; roadsides and waste places).

10. \**Bromus sterilis* L.

Brome Grass, Barren Brome

Naturalized (native of S Europe)

First glume 1-nerved, second glume 3-nerved; lemma teeth to 2 mm long; awn of lemma 2 cm long or more, longer than body of lemma; inflorescence racemelike, branches usually unbranched. Cultivated ground.

REFERENCE: Selby 1891a:111a.

HERBARIUM RECORDS: [date?]-Cols., *Werner* (CLM); 6 Jul 1892—OSU grounds, Cols., *Werner*; 25 Jun 1956—OSU campus, *Lampe*; 22 May 1980—NE corner of St. Clair Ave. bridge over RR yard immediately S of 1st Ave., NW ¼ SE Cols. Quad., *W. Carr* 2792.

NOTE: Not mentioned for Franklin Co. by Braun 1967:71 (waste places & roadsides) or Weishaupt 1971:33 (weedy grasses of open places).

30. ELYMUS L. Wild-rye

Perennials; spikelets 1-several-flowered, 2 or more at each node of rachis, side to rachis; glumes narrow or setaceous, asymmetric, usually awned; lemma rounded on back, nerveless or faintly nerved, usually with long awn from tip.

a Spikelets solitary at each node of rachis. 1. *E. trachycaulus*

a' Spikelets 2 at each node of rachis.

b Spikelets ascending at first, horizontal at maturity; one or both glumes minute, or awnlike and much shorter than lemma. 6. *E. hystrix*

b' Spikelets ascending or erect at maturity; both glumes present, about equal, not much smaller than lemmas.

c Awns divergently curved at maturity; spikelets usually 3-6-flowered, often more than 2 at a node; palea (from lowest floret of spikelet from middle of spike) usually 10 mm long or more; base of glume not terete. 2. *E. canadensis*

c' Awns straight at maturity, rarely absent; spikelets 2-4-flowered, usually 2 at a node; palea less than 9 mm long; base of glume terete.

d Florets readily falling from glumes; glumes scarcely widened above, base little or not bowed out; base of spike exerted.

e Spikelet 1-2-flowered; spike to 12 cm long; palea about as long as body of lemma; upper surface of blades usually short-villous. 4. *E. villosus*, in the typical form, lemma and glumes are villous; in rarer form *arkansanus*, lemma and glumes are glabrous or scabrous.

e' Spikelet 2-4-flowered; spike to 2 dm long; palea of lowest floret of spikelet 2 mm or more shorter than body of lemma; sheaths and blades glabrous or scabrous; lemma and glumes hispidulous to glabrous. 5. *E. riparius*

d' Florets not falling from glumes; glumes widened upward, somewhat twisted, base yellowish, hard, bowed out. 3. *E. virginicus*,

f Lower part of spike usually included in inflated upper sheath.

g Lemma glabrous or scabrous, var. *virginicus*

g' Lemma hirsute, var. *virginicus* forma *hirsutiglumis* (Scribn.) Fernald

f' Spike well exerted; upper sheath not inflated; lemma glabrous to hirsute, var. *glabriflorus*

1. †*Elymus trachycaulus* (Link) Gould

Wheat Grass, Bearded Wheat Grass

Without rhizomes, anthers 3-7 mm long; var. *glaucum* has each spikelet overlapping base of next above on same side, and lemma with awn from nearly as long as to longer than body. Sandy wasteland and fields. Syn.: *Agropyron caninum* of American authors, not (L.) P.Beauv., *A. pauciflorum* (Schwein.) Hitchc., *A. subsecundum* (Link) Hitchc., *A. trachycaulum* (Link) Malte var. *glaucum* (Pease & A.H.Moore) Malte

REFERENCE: Braun 1967:95.

HERBARIUM RECORD: 195\_—old field near RR, 17th Ave., Cols., *Rypma*.

2. *Elymus canadensis* L.

Canada Wild-rye

Spikelets in rows on both sides of rachis; spikelets 2 or more at each node, 1-several flowered, side to rachis; both glumes present, about equal, usually awned, not much shorter than lemma; lemma long awned at tip. Awns divergently curved at maturity, spikelets usually 3-6 flowered, often more than 2 at a node, palea usually 10 mm long or more; base of glume not terete.

ELYMUS



REFERENCES: Sullivant 1840:50; Selby & Craig 1890:17; Selby 1891a:111a (#978 Re-collected); Kellerman & Werner 1893:232 (very abundant near the river, rather more so than *Elymus virginicus*, Aug 1890); Braun 1967:98 (illus. p. 96).  
HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 28 Aug 1907—Cols., *W. Kellerman*.

**3. *Elymus virginicus* L.**

Virginia Wild-rye

Glumes noticeably widened above base, base yellowish and bowed out; florets not falling away from glumes.

Two varieties are recognized:

var. *virginicus*

Lower part of spike usually included in inflated upper sheath or slightly exerted.

REFERENCES: Sullivant 1840:50; Craig 1890:110 (abundant in the rich alluvial soil near the river); Selby & Craig 1890:17; Braun 1967:98 (illus. p. 96).

HERBARIUM RECORDS: 1834—Worthington, *J. Paddock Collection* (ILL); 1840—Cols., *Sullivant*; Sep 1890—Cols., *Werner* (CLM, OS); 24 Aug 1898—OSU Bot. Garden; 19 Aug 1907—Cols., *W. Kellerman*; 3 Jul 1939—Cols., *Dore*; 11 Aug 1989—along Scioto R., just S of Fishinger Rd Bridge, Tarbue-Murphy Landing, Upper Arlington, Perry Twp., *Lowden 4278*.

NOTE: All the above cited specimens have glabrous or scabrous lemmas except for the Werner specimens which have hirsute lemmas and can be referred to *Elymus virginicus* var. *virginicus* forma *hirsutiglumis* (Scribn.) Fernald.

var. *glabriflorus* (Vasey) Bush

Differing from the typical var. by having upper sheaths not inflated; spikes well exerted.

HERBARIUM RECORDS: 1834—Worthington, *J. Paddock Collection* (ILL); 1890—Franklin Co., *Werner* (CLM); Sep 1890—Cols., *Werner* (CLM); 3 Jul 1939—Cols., *Dore*; 3 Oct 1963—University Woods, Cols., *Cooke* (BGSU); 21 Aug 1992—Battelle-Darby Creek Metro Park; floodplain forest W of Cedar Ridge picnic area, Pleasant Twp., *Watts 637*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:98.

**4. *Elymus villosus* Muhl.**

Downy Wild Rye

Spikelet 1 or more flowered; spike to 12 cm long; florets readily falling from glumes; base of spike exerted; upper surface of blades short-villous. Syn.: *E. striatus* of American authors, not Willd., *E. striatus* Willd. var. *villosus* A.Gray

REFERENCES: Sullivant 1840:50; Selby & Craig 1890:17; Kellerman & Werner 1893:232 (a single plant, Aug 1890); Braun 1967:98 (illus. p. 96).

Two forms are recognized:

forma *villosus*

Lemma and glumes villous. Dry woods.

HERBARIUM RECORDS: Aug 1890—Cols., *Werner*; 11 Jul 1892—Cols., *Bogue*; 3 Jul 1939—Cols., *Dore*; 7 Jun 1991—Boyer Park, end of Park St., E of Rt. 3, Westerville, Blendon Twp., *Lowden 4662*.

forma *arkansanus* (Scribn. & C.R.Ball) Fernald

Similar to the typical form except lemma and glumes are glabrous or scabrous. Dry woods, creek shores, fields, mesic woods or floodplain. Syn.: *E. striatus* of American authors, not Willd., *E. striatus* Willd. var. *villosus* A.Gray

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 3 Jul 1939—Cols., *Dore*; 19 Jul 1977—Big Darby Creek, NW of Orient, Pleasant Twp., *Cusick*; 21 Jul 1986—Highbanks Metro Park (Delaware Co.), open fields, *Watts 341* (OS, OWU); 5 Jun 1987—Tuttle Park, E bank of Olentangy R., between Lane Ave. & Dodridge St. bridges, Cols., *T. Lammers 6115*; 19 Jul 1989—Antrim Park, E of Rt. 315, N of Bethel Rd., Sharon Twp., *Lowden 4209*; 26 Jun 1990—W of Big Darby Creek along the Harrisburg Georgesville Rd., woody area 2 mi. S of Darbydale, 1.5 mi. N of Gay Rd., Pleasant Twp., *Lowden 4419*.

**5. *Elymus riparius* Wiegand**

Nodding Wild-rye

Spike to 2 dm long; awn straight at maturity; spikelets 2-4 flowered; base of glume circular; sheaths and blades glabrous or scabrous; base of spike exerted; florets readily falling away from glumes.

REFERENCE: Braun 1967:99.

HERBARIUM RECORDS: Sep 1890—Cols., *Werner* (CLM); 12 Oct 1901—So. Cols., *Eckman*; 10 Aug 1907—Cols., *W. Kellerman*.

**6. *Elymus hystrix* L.**

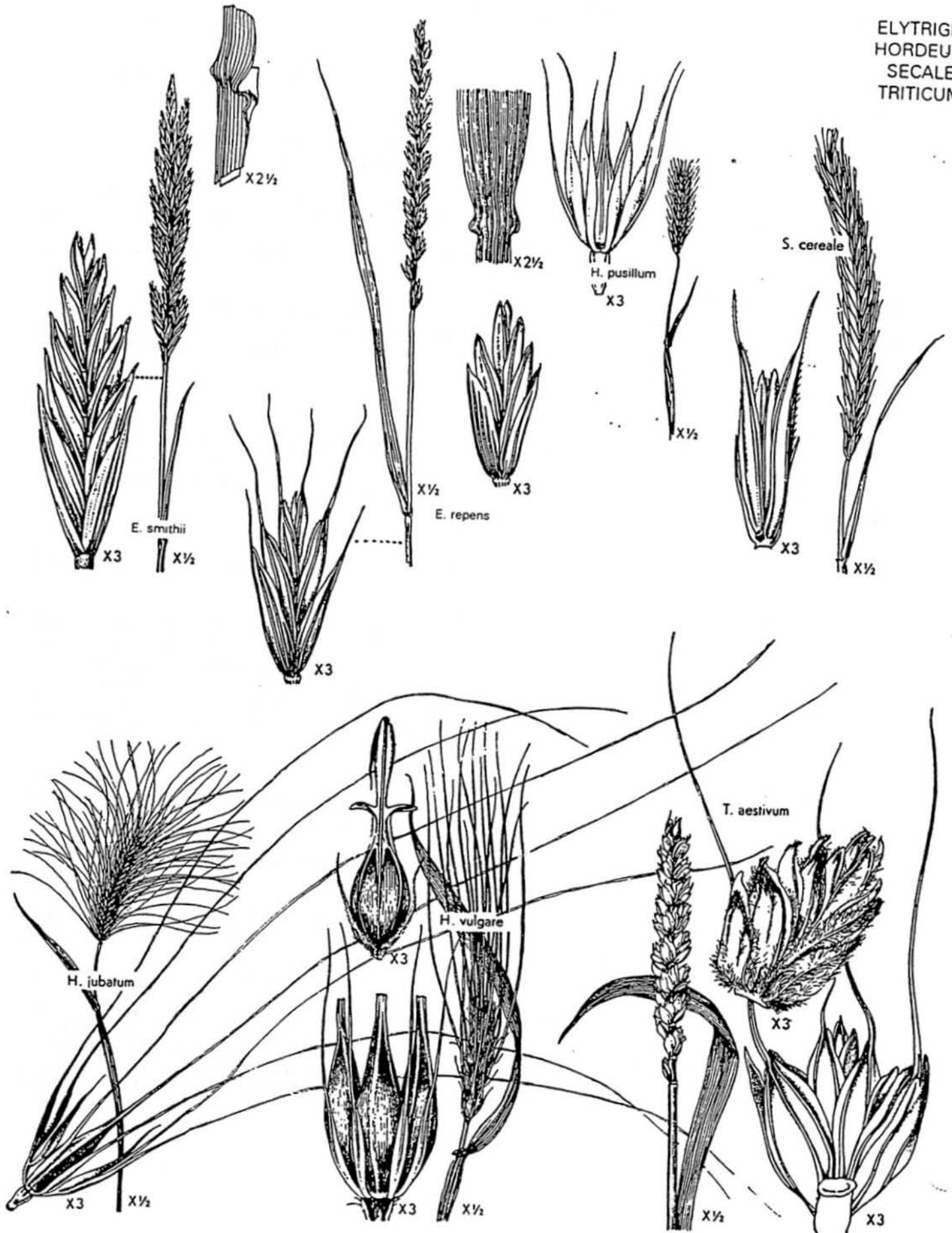
Bottle-brush Grass, Lyme Grass, Hedge-hog Grass

Spikelets in rows on a rachis, 2-4 flowered, usually 2 at each node of rachis, horizontally spreading at maturity, falling early; glumes minute, none or awnlike; lemma narrow with slender straight awn. Dry woods, edge of woods, margin of swamps in drier area. Syn.: *Asprella hystrix* Willd., *Hystrix patula* Moench

REFERENCES: Sullivant 1840:50; Craig 1890:110 (in moist shady places along the river bank, rare); Selby & Craig 1890:17; Braun 1967:99 (illus. p. 96).

HERBARIUM RECORDS: [ca. 1840]—Cols., *Sullivant* (URB); 30 Jun 1890—Neil's Run, Cols., *E. Evans*; 30 May 1896—Reservoir Park, *M. Wright*; 18 Jul 1898—Hayden Falls, *W. Kellerman*; 23 Jun 1939—Cols., *Dore*; 4 Jul 1972—Alton-Darby Creek Rd. & Cole Rd., *D. Keil 9340*; 4 Jul 1980—above Hayden Run, small park S of Hayden Run Rd., W of bridge over Scioto R., NE corner of Norwich Twp., NW Cols. Quad., *Shelly 55* (MU); [ca. 1982]—Blendon Woods, *Owens*; 6 Nov 1984—Gahanna Woods State Nature Preserve, swamp in SW corner of preserve (V), *Tyrrell*; 15 & 29 Jun 1986—Highbanks Metro Park (Delaware Co.), *Witsberger* (OS, OWU); 16 Jul 1990—Overbrook Dr. Ravine off N. High St., Clinton Twp., *Lowden 4444*.

ELYTRIGIA  
HORDEUM  
SECALE  
TRITICUM



### 31. ELYTRIGIA Desv. Quack Grass, Wheat Grass

Perennials, spikelets several-flowered, usually solitary at nodes of rachis, side to rachis, ascending or appressed, each sometimes overlapping base of one next above on same side but not reaching almost to its tip; middle internodes of the spike mostly 4 mm or more; glumes firm, usually several-nerved, acute or awned; lemma firm, 5-7 nerved, acute or awned.

- a Glumes tapering from near base to a sharp point; spikelets 6-12-flowered; blades mostly 2-4 mm wide; bands of upper nodes shorter than wide. 1. *E. smithii*
- a' Glumes tapering from above middle; spikelets 4-8-flowered; blades mostly 5-10 mm wide; bands of upper nodes about as long as wide. 2. *E. repens*

1. \**Elytrigia smithii* (Rydb.) Á.Löve  
Adventive (native to W U.S.)

Western Wheat Grass

Glumes tapering from near base to a sharp point, spikelets 6-12 flowered; blades mostly 2-4 mm wide. Along RR tracks. Syn.: *Agropyron smithii* Rydb.

HERBARIUM RECORD: 14 Jun 1955—along Penna. RR NE of Worthington, *Blaydes*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:93 (recorded from 8 counties ... native from Iowa and Kansas westward; introduced in Ohio).

2. \**Elytrigia repens* (L.) Nevski  
Naturalized (native of Eurasia)

Couch Grass, Quack Grass

Plants with rhizomes; spikelets 4-8-flowered, solitary at nodes of rachis, side to rachis; glumes tapering from above middle; anthers 3-7 mm long; blades 5-10 mm. Meadows & weedy fields. Syn.: *Agropyron repens* (L.) P.Beauv., *Triticum repens* L.

REFERENCES: Sullivant 1840:50 (naturalized plants); Craig 1890:110 (this vile weed is fortunately not common in our limits); Selby & Craig 1890:17.

HERBARIUM RECORDS: 15 Jun 1895—Cols., *W. Kellerman*; 27 Jun 1939—Cols., *Dore*; 20 Jun 1980—ODNR, Fountain Sq., Morse Rd., 1.8 mi. E of I-71, NE Cols. Quad., *Shelly 49* (MU); 23 Jul 1991—Highland Dr., along RR tracks, W of Olentangy River Rd., Clinton Twp., *Lowden 4782*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:95 (roadsides, waste places, cultivated fields ... abundant in Ohio; often a troublesome weed) (illus. p. 94).

### 32. HORDEUM L. Barley

Rachis of inflorescence breaking at maturity at base of each segment (except in *H. vulgare*), segment and attached spikelets falling together; spikelets of 1, rarely 2, florets, usually 3 at each node of rachis, central one sessile, lateral ones sometimes pedicelated and often vestigial; glumes narrow or setaceous, in front of spikelet; lemma rounded on back, awned.

- a Awn of lemma (at least of central spikelet) several times as long as body, or lemma awnless and 3-lobed at apex.
- b Inflorescence narrow, awns erect; lemmas of all spikelets with awn much longer and coarser than awns of glumes (in Beardless Barley, lemma awnless and 3-lobed at summit). 3. *H. vulgare*
- b' Inflorescence as wide as long, awns long and spreading; lemma of central spikelet and glumes similarly awned. 1. *H. jubatum*
- a' Awn of lemma of central spikelet equaling or longer than body but not several times as long; inflorescence slender, awns erect. 2. *H. pusillum*

1. \**Hordeum jubatum* L.  
Naturalized (native to most of the U.S.)

Squirreltail Barley

Spikelets in rows on a rachis, usually 3 at each node, each with a perfect floret or lateral ones vestigial. Lemma of central spikelet and glumes similarly awned, awns long and spreading. Awn of lemma in central spikelet several times as long as lemma body. Pastures, vacant lots, weedy fields & roadsides.

REFERENCES: Selby & Craig 1890:18; Braun 1967:99 (probably introduced in Ohio) (illus. p. 100).

HERBARIUM RECORDS: 2 Sep 1890—OSU campus & Cols., *Hine*; 1 Jul 1922—Perry Twp., *J. H. Schaffner*; 20 Jun 1929—Cols., *J. H. Schaffner*; 3 Jun 1933—Franklin Co., *Weishaupt*; 12 Jun 1934—OSU campus, *J. H. Schaffner*; 11 Aug 1961—Rt. 62, 1 mi. NE of New Albany, *E. Herrick* (KE); 30 May 1977—along bank of Olentangy R. at King Ave., beside Battelle Inst., Cols., *W. Carr 268*; 19 Jun 1980—ODNR complex, Fountain Sq.,

Morse Rd. 1.8 mi. E of I-71, NE Cols. Quad., *Shelly 47* (MU); 1 Jun 1982—Rt. 161, *Owens*; 26 May 1987—OSU campus, front of Biol. Sci. Bldg., *Jen 68*; 6 Jul 1992—along Winchester Pike, just NW of I-270 overpass, Madison Twp., *Lowden 4979*.

2. †*Hordeum pusillum* L.

Little Barley

Awn of lemma of central spikelet equaling or longer than body but not several times as long; inflorescence slender, awns erect. Glumes of fertile spikelet and first glume of lateral spikelets widened above base.

HERBARIUM RECORD: 5 Jun 1980—along RR tracks 1 blk. E of N. 4th St., on overpass at 17th Ave., SW corner of NE Cols. Quad., *W. Carr 2881*; 24 May 1996—Norwich St., Hilliard, weedy, at fairgrounds race track, Hilliard Quad., *Cusick 33075*.

NOTE: Not mapped for Franklin Co. by Braun 1967:100 (open ground, much of the U.S.).

3. \**Hordeum vulgare* L.

Common Barley

Cultivated Escape (European cultigen)

Awn of lemma (in the central spikelet) several times as long as lemma body; inflorescence narrow; awns erect; awns of lemmas much longer and coarser than awns of glumes.

HERBARIUM RECORDS: 1 Nov 1902—Franklin Co., *J. H. Schaffner*; 11 Jun 1989—RR tracks, Highland Dr., S of Henderson Rd., Clinton Twp., *Lowden 4145*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:100 (cult., sometimes spontaneous but not persisting).

33. AGROPYRON Gaertn. Crested Wheat Grass

Perennials, similar to *Elytrigia*, except spikelets closely crowded and spreading away from the rachis, each reaching almost to tip of one next above on the same side; middle internodes of the spike only 0.5-2(-3) mm.

1. \**Agropyron cristatum* (L.) Gaertn.

Wheat Grass

Adventive (introduced from Eurasia)

Grass plots.

HERBARIUM RECORD: Fall 1940—OSU, introduced, *Blaydes*.

NOTE: Not treated by Braun (1967).

34. SECALE L. Rye

Tall annual; somewhat blue-green; leaves about 1 cm wide; spikelets usually with 2 perfect flowers, solitary at nodes or rachis, side to rachis; glumes narrow, shorter than lemma; lemma long-awned.

1. \**Secale cereale* L.

Rye

Adventive (European cultigen)

Spikelets in 2 rows on opposite sides of rachis; spikelets solitary at each node of rachis, side to rachis; spikelets 2-flowered; glumes shorter than lemma; lemma long awned, margins and keel ciliate.

REFERENCE: Braun 1967:97 (a crop plant sometimes spontaneous but not persisting) (illus. p. 94).

HERBARIUM RECORDS: 11 Jun 1937—Hayden Falls, *J. H. Schaffner*; 24 May 1963—dike along Olentangy R. at Sewage Disposal Plant, OSU, *Cusick*.

35. TRITICUM L. Wheat

Annual; blades 1-2 cm wide; spikelets 2-5-flowered, solitary at nodes of rachis, side to rachis; glumes broadly ovate, mucronate; lemmas broad, awned or awnless, keeled at one side of center.

1. \**Triticum aestivum* L.

Common Wheat

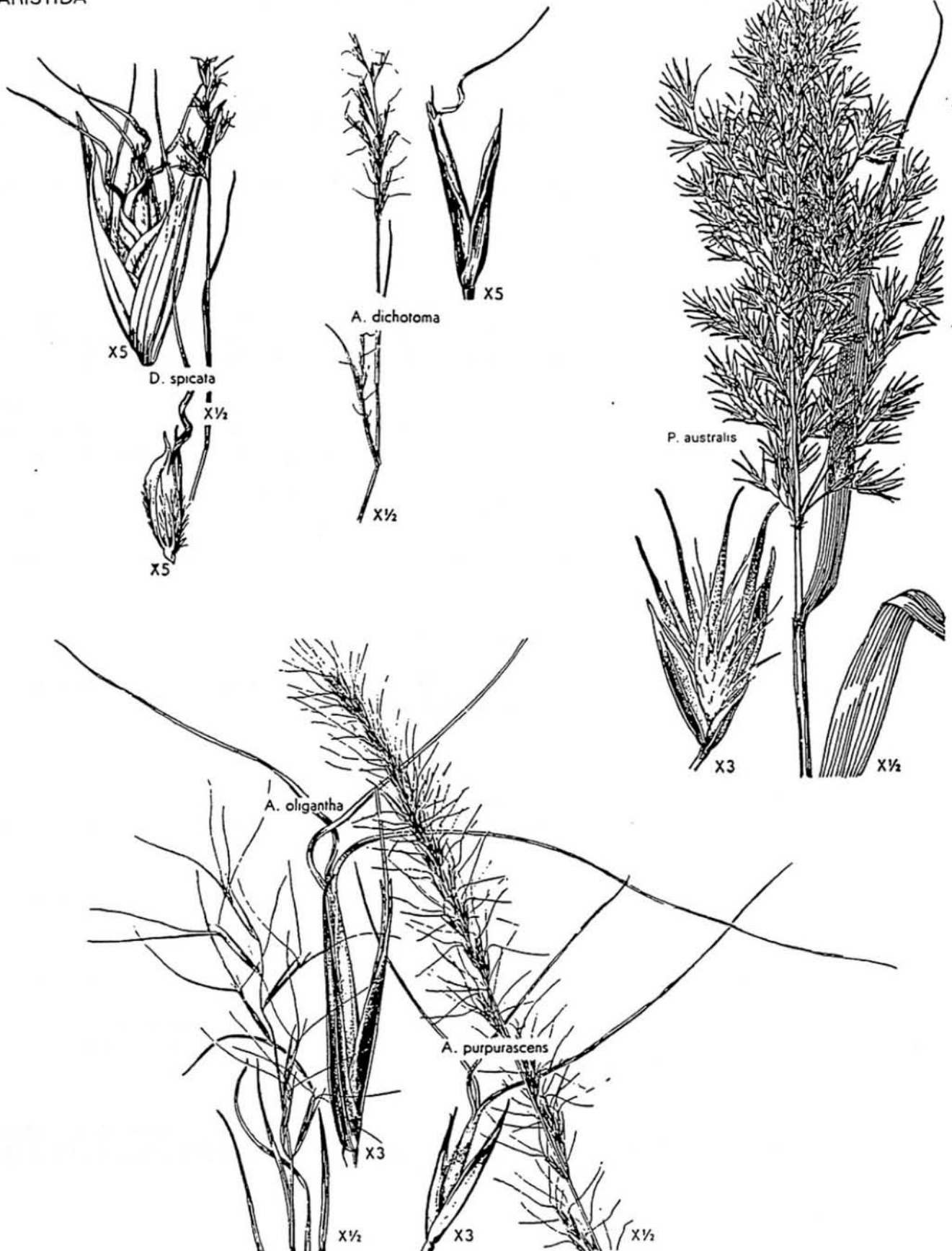
Adventive (Eurasian cultigen)

Spikelets solitary at nodes of rachis, 2-5 flowered with side to rachis; glumes broadly ovate, mucronate; lemmas broad, awned or awnless.

HERBARIUM RECORDS: 27 May 1896—Clintonville, *M. Wright*; 2 Jun 1909—University farm, *F. Huston*; 30 May 1937—Cols., *J. H. Schaffner*; 11 Jun 1937—Hayden Falls, *J. H. Schaffner*; 11 Jun 1989—RR tracks, Highland Dr., S of Henderson Rd., Clinton Twp., *Lowden 4146*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:97 (extensively planted in U.S.) (illus. p. 94).

DANTHONIA  
PHRAGMITES  
ARISTIDA



### 36. DANTHONIA Lam. & DC. Wild Oat Grass

Blades narrow, often curved or twisted; panicles of few several-flowered spikelets; glumes acute, usually exceeding uppermost floret; lemma rounded on back, faintly several-nerved, 2-toothed, a flat twisted awn borne between the teeth.

#### 1. *Danthonia spicata* (L.) P.Beauv.

Poverty Oat Grass

Upper leaf often not reaching inflorescence; inflorescence often a raceme; spikelets containing several bisporangiate florets; glumes overtopping florets above; lemma awn bent, spiral at base; lemma teeth less than 2.0 mm long, acute to lance-attenuate. Dry soil.

REFERENCES: Sullivant 1840:49; Selby & Craig 1890:17; Braun 1967:109 (illus. p. 108).

HERBARIUM RECORDS: 1840—Cols., *Sullivant* (OS, URB); 23 Jun 1939—near Cols., *Dore*; 11 Jun 1989—Highbanks Metro Park (Delaware Co.), open oak bluffs N & S of the county line, *Watts 479* (OS, OWU).

### 37. PHRAGMITES Adans. Reed Grass

Culms stout, 2-4 m tall; with rhizomes; growing in colonies; blades 1-5 cm wide; panicle large, purple when young, rachilla-hairs conspicuous; spikelets 1-1.5 cm long, several-flowered; glumes lanceolate, acute; lemma narrow, 3-nerved, long-acuminate, much longer than palea, lowest lemma of spikelet empty or subtending a staminate flower.

#### 1. *Phragmites australis* (Cav.) Trin.

Reed Grass

Spikelets containing two or more bisporangiate florets; both glumes shorter than lemmas just above; articulation above glumes; lowest lemma empty; upper lemmas awned; hairs on rachilla equal or exceed body of lemma. Syn.: *P. communis* Trin.

REFERENCES: Selby & Craig 1890:18; Braun 1967:89 (banks of streams and lakes, ditches, and swamps) (illus. p. 90).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 3 Oct 1901—S Cols., *W. Kellerman*; 29 Aug 1971—Cols., N of E. 5th Ave. near DSCS (Govt. Depot), *Taft*; 9 Aug 1990—S side of Rt. 317, jct. of Parsons Ave. & Big Walnut Creek, Hamilton Twp., *Lowden 4544*.

NOTE: Sullivant 1840:48 reported on plants collected in adjacent counties. Well known as *Phragmites communis* until the earlier name was found to apply (Voss, 1972).

### 38. ARISTIDA L. Triple-awn Grass

Usually tufted; blades narrow, often rolled; spikelets 1-flowered, in narrow panicles; glumes narrow, acute to awned; lemma linear, indurate, convolute, terete, with 3-parted awn; callus sharp.

a Middle awn not much longer than lateral awns.

b Lemma about 7 mm long; awns 1.5-3 cm long; perennial. 1. *A. purpurascens*

b' Lemma about 2 cm long; awns 3-7 cm long; annual. 2. *A. oligantha*

a' Middle awn of lemma at least twice as long as lateral awns, up to 10 mm long, coiled ½ to 1 turn, horizontally divergent; annual. 3. *A. dichotoma*

#### 1. †*Aristida purpurascens* Poir.

Purple Triple-awned Grass

REFERENCE: Craig 1890:109 (sparingly on the campus E of the Experimental Station).

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Braun 1967:130.

#### 2. \**Aristida oligantha* Michx.

Prairie Three-awn

Adventive (native of Ohio)

Lemma about 1.5-2.0 cm long; middle awn of lemma more than 3 cm long, not much longer than lateral awns.

HERBARIUM RECORD: 31 Aug 1992—S end of Cleveland Ave. at I-670, just S of First Ave., common in gravelly waste areas along abandoned RR tracks, Franklin Twp., SE Cols. Quad., *McCormac 4859*.

NOTE: Not mapped for Franklin Co. by Braun 1967:130 (illus. p. 128).

#### 3. *Aristida dichotoma* Michx.

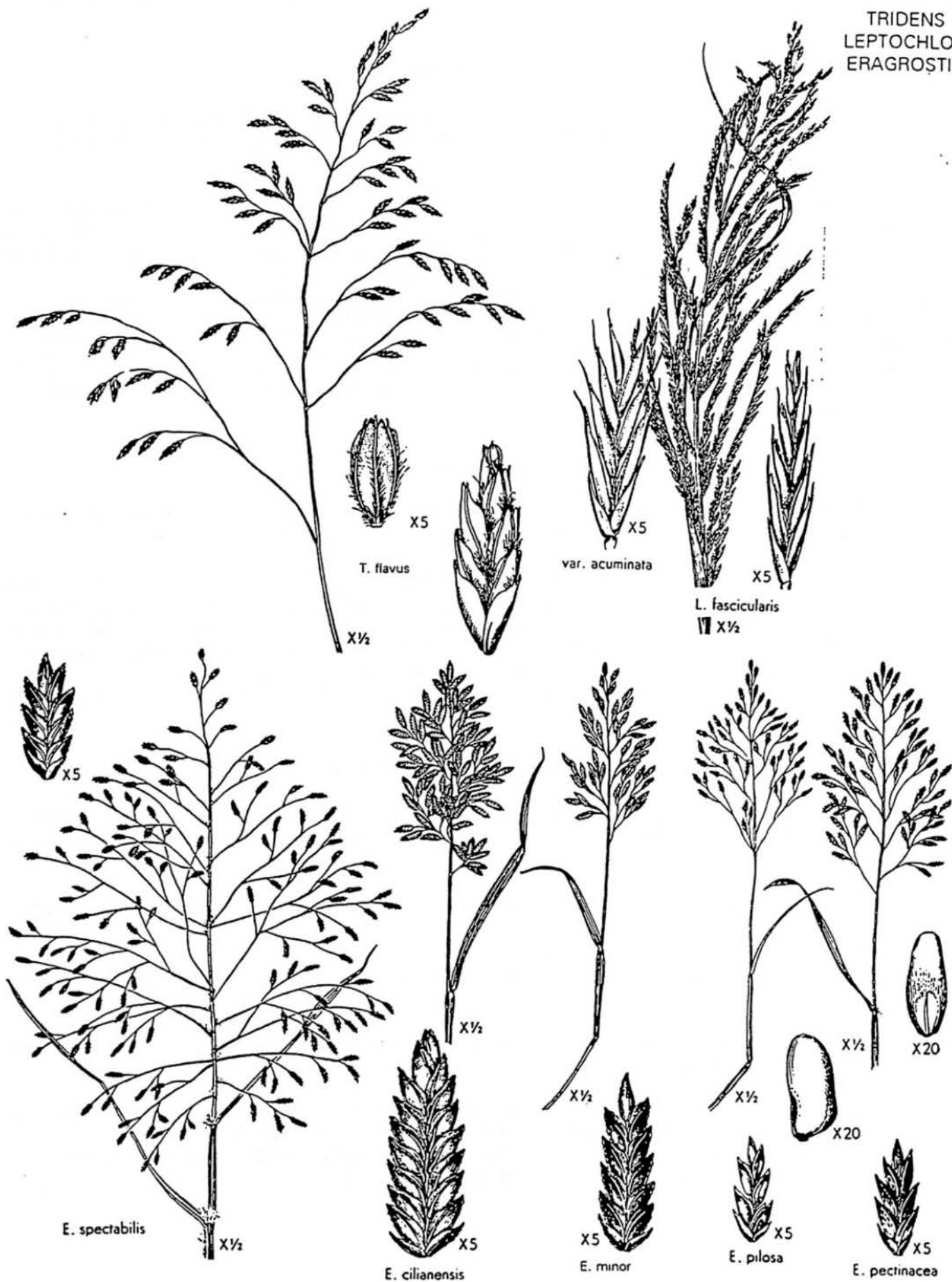
Churchmouse Three-awn

Middle awn of lemma approx. 7 mm long, much more than twice as long as lateral awns, coiled and horizontally divergent; glumes 6-8 (-9) mm long. Dry, leached, open ground.

HERBARIUM RECORD: 1840—Cols., *Sullivant*.



TRIDENS  
LEPTOCHLOA  
ERAGROSTIS



NOTE: Sullivant 1840:47 & Selby & Craig 1890:17 (introduced) reported on plants collected in adjacent counties. Not mapped for Franklin Co. by Braun 1967:130 (illus. p. 128).

### 39. TRIDENS Roem. & Schult.

Sheaths bearded at summit; panicle open, axis, branches, and pedicels viscid, the axils pubescent; spikelets purple or sometimes yellow or green, about 6-8-flowered, 5-8 mm long; lemma broad, obtuse, about 4 mm long, 3-nerved, nerves pubescent below, excurrent.

#### 1. *Tridens flavus* (L.) Hitchc.

Tall Redtop, Purpletop, Grease Grass

Spikelets containing about 6-7 bisporangiate florets; glumes shorter than lemma just above, articulation above glumes; panicles large, open, purple or green-yellow, branches drooping; lemma toothed, 3-nerved; all nerves pubescent below and excurrent; moderately tall grass. Syn.: *Triodia flava* (L.) Smyth

REFERENCES: Selby 1891a:111a (*Triodia cuprea* Jacq.); Braun 1967:92 (common along roadsides and in old fields) (illus. p. 90).

HERBARIUM RECORDS: 1840—Cols., Sullivant; 3 Oct 1891—Georgesville, Selby; 24 Sep 1892—Georgesville, Werner; 1 Oct 1912—Cols., J. H. Schaffner; 10 & 16 Sep 1934—Indian Springs ravine, Cols., J. H. Schaffner; Summer 1977—Pickerington Marsh, intersection of Wright Rd. & Bowen Rd., 3 mi. W of Pickerington & 3 mi. N of Canal Winchester, Sect. 18, Madison Twp., Sect. 17, Violet Twp., Franklin/Fairfield Co. Line, Eu. Wright; 10 Sep 1991—along Rt. 40 W of Alton, 1 mi. E of Amity Rd., Prairie Twp., Lowden 4825; 12 Sep 1991—Hoover Dam Park, W. of Cabbage Rd. along Walnut St., Blendon Twp., Lowden 4837; 3 Sep 1992—W side of Cabbage Rd., common in dry openings in brushy field, approx. ½ mi. S of Walnut St., Blendon Twp., New Albany Quad., McCormac 4890.

### 40. LEPTOCHLOA P.Beauv.

Annual; spikelets 2-several-flowered, in slender, usually many, spikelike racemes which are racemously attached to main axis of inflorescence; glumes 1-nerved, longer or shorter than lower lemma; lemma 3-nerved.

#### 1. †*Leptochloa fascicularis* (Lam.) A.Gray var. *acuminata* (Nash) Gleason

Sprangletop

Single spikelets or groups of spikelets forming spikelike racemes which are racemously attached to main axis of inflorescence; sheaths glabrous. Spikelets 6-12 mm long, 2-several flowered. Panicle-base included in sheath. Lowest lemma 4.0-5.0 mm long. The specimen corresponds with this var. based on first glume is 3 mm long, second glume 4 mm long, and awn on lemma about 1 mm long. Syn.: *L. acuminata* (Nash) Mohlenbr.

HERBARIUM RECORD: 23 Sep 1985—common, berm of I-270 at Rt. 33 exit, W of Dublin, Washington Twp., Hilliard Quad., Cusick 24829.

NOTE: Not mapped for Franklin Co. by Braun 1967:133.

### 41. ERAGROSTIS Wolf Love Grass

Ligule a ring of hairs; spikelets flattened, of few to many often closely imbricated florets, in panicles; glumes 1-nerved or the second 3-nerved; lemmas small, 3-nerved; rachilla continuous, lemma and grain falling from persistent palea.

a Stems prostrate, rooting at nodes; flowering branches short, erect or ascending; of mud flats and stream banks.

#### 8. *E. hypnoides*

a' Stems erect, sometimes bent at base, not prostrate.

b Glands present on some or all of the following parts: pedicels, glumes, lemmas, sheaths, blades; florets of spikelet many, rarely few.

c Spikelet 2.5 mm wide or more; lemma more than 2 mm long. 2. *E. cilianensis*

c' Spikelet 2 mm wide or less, lemma less than 2 mm long; glands often more abundant on sheaths and blades than elsewhere. 3. *E. minor*

b' Without glands.

d Perennial; panicle ovoid, 2/3 height of entire plant, little or not longer than wide, branches slender, rigid, spreading, spikelets red- or pink-purple, florets 6-12, rarely few. 1. *E. spectabilis*

d' Annual; branches of panicle slender or capillary, not rigid; spikelets usually dark-gray or -purple.

e Florets of spikelet 5 or fewer; panicle cylindrical or ellipsoid.

- f Panicle to 4 dm long, diffuse, 2/3 as long as entire plant; pedicels much longer than spikelets; grain with lengthwise furrow; plants of dry ground. 7. *E. capillaris*
- f' Panicle to 15 cm long, about half as long as entire plant; pedicels not much longer than spikelets; grain without lengthwise furrow; culms much branched; plants of moist ground. 6. *E. frankii*
- e' Florets of spikelet more than 5.
  - g Spikelets 1 mm wide or less, not appressed to branches; panicle delicate and diffuse, branches capillary; lateral nerves of lemma obscure. 4. *E. pilosa*
  - g' Spikelets about 1.5 mm wide, appressed to panicle-branches; panicle open but not diffuse; lateral nerves of lemma conspicuous. 5. *E. pectinacea*

1. *Eragrostis spectabilis* (Pursh) Steud.

Tumble or Purple Love Grass

Panicle ovoid, 2/3 height of entire plant; florets usually 6-12; spikelets red-purple. Roadsides.

HERBARIUM RECORDS: 29 Jul 1965—Indianola Ave. at Wetmore Rd., Clinton Twp., *E. Herrick*; Aug 1982—Blendon Woods, along the refuge fence, *Owens*.

NOTE: Not mapped for Franklin Co. by Braun 1967:85 (along roadsides and in fields, and waste places) (illus. p. 84).

2. \**Eragrostis cilianensis* (All.) Janch.

Strong-scented Love-grass, Stinking Eragrostis

Naturalized (native of Europe)

Stems erect, glands present on pedicels, glumes and lemmas; spikelet 2.5 mm wide or more; lemma more than 2 mm long. Weed in gardens & fields. Syn.: *E. major* Host, *E. megastachya* (Koeler) Link, *E. poaeoides* var. *megastachya* A.Gray

REFERENCES: Craig 1890:109 (common in wet places and roadsides; some fine specimens were found last summer on the old tennis court; 5 Aug 1882, 20 Jul 1887); Selby & Craig 1890:17.

HERBARIUM RECORDS: ca. 1890—Cols., *Craig*; 30 Jul 1890—Cols., *Hine*; 16 Sep 1902—Franklin Co., *Jennings*; 30 Jun 1939—Cols., *Dore*; about 1970—2084 Neil Ave., Cols., *Weishaup*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:85 (cultivated ground, roadsides, waste places, sometimes a weed) (illus. p. 84).

3. \**Eragrostis minor* Host

Love Grass

Adventive (native of Europe)

Glands present on blades and pedicels; spikelets 2 mm wide or less; lemma less than 2 mm wide. RR yards. Syn.:

*E. poaeoides* P.Beauv., *Poa eragrostis* (L.) H.Karst.

REFERENCES: Sullivant 1840:49; Selby & Craig 1890:17.

HERBARIUM RECORD: 29 Sep 1973—along Scioto R. at Grandview Ave. exit, Cols., *Roberts 4283*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:85.

4. \**Eragrostis pilosa* (L.) P.Beauv.

India Love Grass

Adventive (introduced from Europe)

Florets of spikelet more than 5; spikelets 1 mm wide or less, not appressed to branches; panicle diffuse; lateral nerves of lemma obscure. Dry soil. Syn.: *Poa pilosa* L.

REFERENCES: Sullivant 1840:49; Selby & Craig 1890:18; Selby 1891a:111a (#986 Re-collected).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 26 Jul 1939—Cols., *Dore*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:86.

5. *Eragrostis pectinacea* (Michx.) Nees

Love Grass

Florets of spikelet more than 5. Spikelets about 1.5 mm wide, appressed to panicle branches; panicle open but not diffuse; lateral nerves of lemma conspicuous. Paths and sidewalks. Syn.: *E. purshii* Schrad.

REFERENCES: Selby 1891a:111a; Kellerman & Werner 1893:231 (dry places and along paths and drives on the campus, 31 Jul 1890); Braun 1967:86 (illus. p. 84).

HERBARIUM RECORDS: 2 Sep 1890—Cols., *Werner* (CLM); Jul 1891—Cols., *Werner*; 10 Oct 1891—Georgesville, *Werner*; 6 Aug 1892—Cols., *Werner*; 14 Aug 1892—OSU farm, state experimental station grounds, Cols., *Werner* (CLM); 16 Aug 1898—OSU Bot. Garden, *J. H. Schaffner*; 31 Aug 1898—Dublin, *W. Kellerman*; 26 Sep 1936—Cols., *J. H. Schaffner*; 19 Aug 1992—Oakland Park Ave. & Atwood Terrace, moist weedy ground in Oakland Nursery, uncommon, NE Cols. Quad., *Cusick 30453*; 25 Aug 1992—Battelle-Darby Creek Metro Park, edge of Gardner Rd. ¼ mi. NE of Georgesville, Pleasant Twp., *Watts 658*.

6. *Eragrostis frankii* C.A.Mey.

Love Grass

Florets of spikelet usually fewer than 5; panicle to 15 cm long, about half as long as the entire plant; pedicels not much longer than spikelets; grain without lengthwise furrow; stems erect. Fields & bottomlands.

REFERENCES: Selby & Craig 1890:17; Kellerman & Werner 1893:231 (fields in the bottomlands back of the north dormitory, 5 Aug 1890); Braun 1967:85 (illus. p. 84).

HERBARIUM RECORDS: 30 Aug 1890—Cols., *Werner*; 6 Aug 1892—Cols., *Werner*; 14 Aug 1892—Cols., *Werner* (CLM, OS).

**7. *Eragrostis capillaris* (L.) Nees**

Capillary Love Grass

Spikelets uniform containing two or more bisporangiate florets; neither glume overtopping body of lemma just above; lemma 1-3 nerved, glabrous or scabrous, less than 3 mm long. Panicle to 4 dm long, diffuse, 2/3 as long as entire plant; pedicels much longer than spikelets; grain with lengthwise furrow. Fields. Syn.: *Poa capillaris* L.

REFERENCES: Sullivant 1840:49; Selby & Craig 1890:17; Kellerman & Werner 1893:231 (fields back of Veterinary Hospital, 5 Aug 1890).

HERBARIUM RECORDS: 5 Aug 1890—Cols., *Werner* (CLM); 20 Aug 1899—Scioto R., *Selby* (WOOS).

NOTE: Not mapped for Franklin Co. by Braun 1967:85.

**8. *Eragrostis hypnoides* (Lam.) Britton, Sterns & Poggenb.**

Creeping Love Grass

Stems prostrate, rooting at nodes. Margins of rivers, brooks and lagoons. Syn.: *E. reptans* (Michx.) Nees, *Poa reptans* Michx.

REFERENCES: Sullivant 1840:50; Selby & Craig 1890:18; Kellerman & Werner 1893:231 (margin of brook and borders of lagoon, 31 Jul 1890); Braun 1967:83 (illus. 84).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 5 Aug 1890—OSU lagoon, *Werner*; 5 Aug 1890—Cols., *Werner* (CLM); 24 Aug 1892—Alum Creek, *Bogue*; Summer 1988—along the Olentangy R., OSU campus, Cols., *Delong*; 23 Jul 1991—OSU Campus, E bank of Olentangy R., just S of Lane Ave. bridge, Clinton Twp., *Lowden* 4783; 12 Sep 1991—Hoover Dam Park, N of Cabbage Rd. entrance, reservoir inlet, Blendon Twp., *Lowden* 4832.

**42. ELEUSINE Gaertn.**

Smooth tufted annual; spikelets few- to several-flowered, sessile, imbricated, in 2 rows in a one-sided spike, the spikes digitate at tip of main axis or 1 or 2 below tip; glumes 1-nerved; pericarp free from seed.

**1. \**Eleusine indica* (L.) Gaertn.**

Yard, Goose, Wire or Crab Grass

Naturalized (native of the Old World)

Spikelets in two rows on one side of the rachis; spikes digitate or inflorescence branches attached near or at tip of peduncle; spikes 5 mm wide; spikelet sessile with 2-several perfect florets; glumes well developed and somewhat keeled. Weed in fields, wasteland and RR yards, common on cinder piles.

REFERENCES: Sullivant 1840:48; Selby & Craig 1890:17.

HERBARIUM RECORDS: 13 Sep 1895—Cols., *Osburn*; 6 Aug 1897—Cols., *W. Kellerman*; 26 Jul & 20 Aug 1939—Cols., *Dore*; 29 Sep 1973—RR yards along Scioto R. at Grandview Ave. exit, Cols., *Roberts* 4282; 24 Jul 1991—OSU Campus, behind B&Z bldg., along walkway to College of Biological Sciences, Clinton Twp., *Lowden* 4784; 23 Sep 1991—Scioto R., occasional on gravel bars, just N of I-270, Hamilton Twp., SW Cols. Quad., *McCormac* 4345; 25 Aug 1992—Battelle-Darby Creek Metro Park, edge of Gardner Rd. ¼ mi. NE of Georgesville, Pleasant Twp., *Watts* 657.

NOTE: Not mentioned for Franklin Co. by Braun 1967:133 (common weed of lawns, gardens, paths, and waste places) (illus. p. 132).

**43. SPOROBOLUS R.Br. Dropseed**

Blades flat or rolled; panicles narrow or open; spikelet 1-flowered; glumes membranous, 1-nerved, shorter than longer than lemma; lemma 1-nerved, awnless; palea often longer than lemma; fruit readily falling from spikelet; pericarp free from seed.

- a Panicle ellipsoid, open; spikelets gray; glumes unequal, the first much shorter than lemma; fruit globose, splitting palea as it enlarges. 1. *S. heterolepis*
- a' Panicle narrow, with appressed branches, usually included in sheath.
  - b Plants moderately tall, perennial; blades long, often rolled, tapering to narrow tips; upper sheath usually inflated, enclosing or partly enclosing terminal panicle; lemma and palea glabrous, blunt at tip. 2. *S. asper*
  - b' Plants short, annual; cauline blades short; all sheaths inflated, panicles usually wholly or partly included.
    - c Lemma pubescent; spikelet 3 mm long or more. 3. *S. vaginiflorus*
    - c' Lemma glabrous; spikelets 2-3 mm long. 4. *S. neglectus*

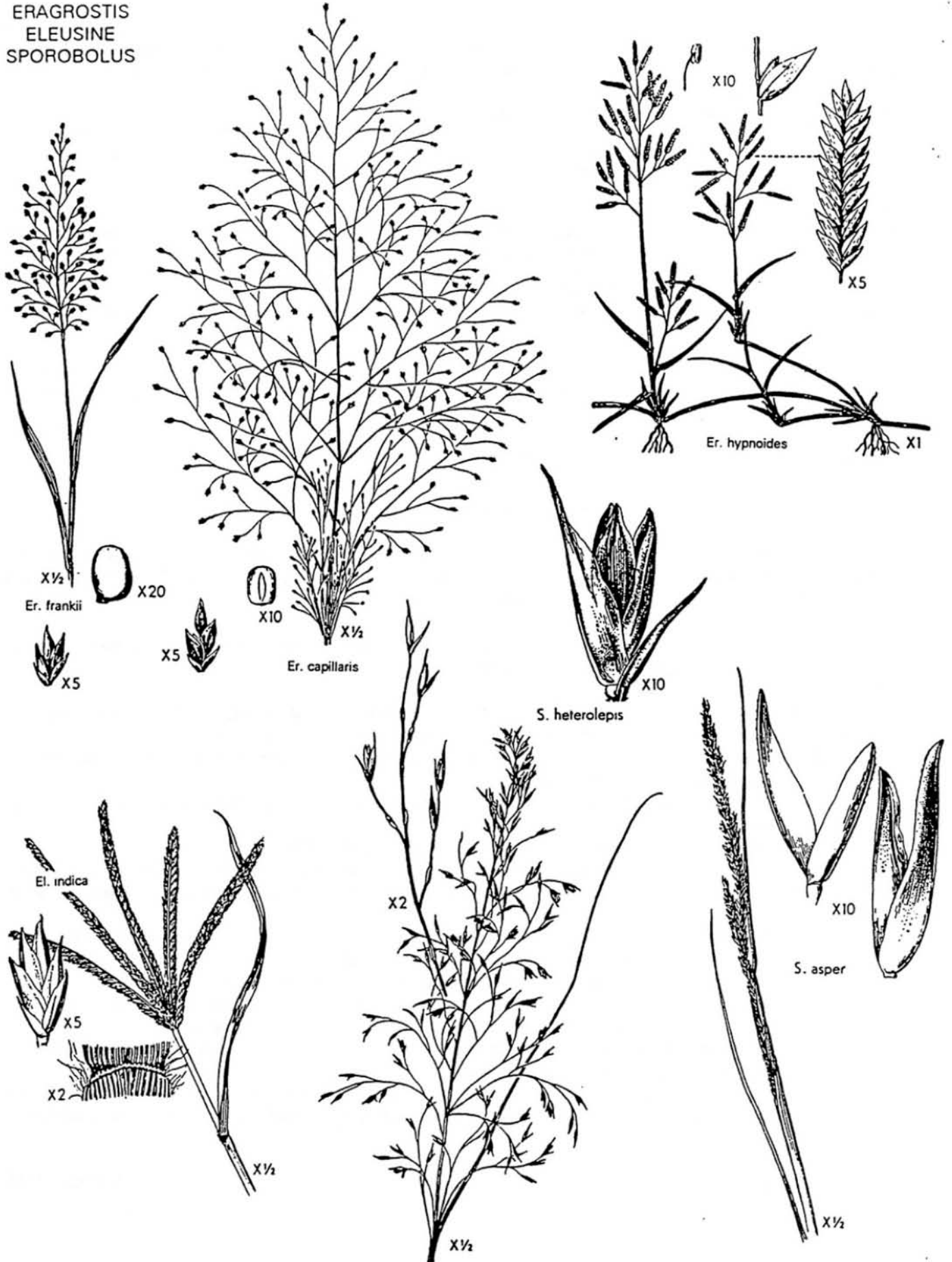
**1. †*Sporobolus heterolepis* A.Gray**

Prairie Dropseed, Northern Dropseed

Panicle open; fruit globose, splitting palea as it enlarges; spikelets gray; second glume longer and wider than first, equaling or slightly exceeding lemma and palea. Syn.: *Vilfa heterolepis* A.Gray

REFERENCES: Sullivant 1840:48, 61; Selby & Craig 1890:18; Selby 1891a:111a (#1029 Re-collected); Jones 1943:105; Braun 1967:123 (prairies); Stuckey & Roberts 1982:31; McCance 1984:A-53.

ERAGROSTIS  
ELEUSINE  
SPOROBOLUS



HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 29 Aug 1892—Georgesville, *Werner* (BGSU, OS); 24 Sep 1892—Georgesville, *Selby* (WOOS).

**2. *Sporobolus asper* (Michx.) Kunth**

Tall Dropseed

Spikelet containing one bisporangiate floret; articulation above glumes. Glumes firm, shorter than lemma; lemma 1-nerved, awnless; palea often longer than lemma. Panicle long and narrow, usually included in inflated sheath; plants fairly tall; blades long, often rolled; lemma and palea glabrous.

REFERENCE: Braun 1967:125 (often along roadsides) (illus. p. 124).

HERBARIUM RECORDS: 11 Sep 1898—Cols., 5th Ave., Sellsville, *W. Kellerman*; 25 Oct 1898—Steelton, Cols., *W. Kellerman*; 3 Nov 1929—Minerva Park, *Gordon & Chapman*; 23 Sep 1934—Parkview Ave. at Broad, Bexley, *E. Thomas*; 9 Oct 1979—NE corner Hudson St. & Summit Ave., Cols., *W. Carr 2560* (KE, OS); 21 Sep 1980—local, grassy bank, E side of I-71 at Cooke Rd. exit ramp, NE Cols. Quad., *Cusick 20470*.

**3. *Sporobolus vaginiflorus* (Torr.) A.W.Wood**

Dropseed

Similar to the preceding; lemma and palea pubescent; spikelets more than 3 mm long; palea long-acuminate, longer than lemma and glumes. Syn.: *S. vaginaeflorus* Vasey, *Agrostis vaginaeflora* Muhl., *Vilfa vaginaeflora* Torr.

REFERENCES: *Sullivant* 1840:48, 61; *Selby & Craig* 1890:18; *Kellerman & Werner* 1893:231 (frequent in portions of the pasture near High St. and on the Campus, especially around the Main Bldg. and Chemical Laboratory); Braun 1967:125 (illus. p. 124).

HERBARIUM RECORDS: 30 Sep 1926—Bexley, along Livingston Ave., *E. Thomas*; 24 Oct 1937—in crack between cement walk and curbstone, Cols., *J. H. Schaffner*.

**4. *Sporobolus neglectus* Nash**

Dropseed

Panicle narrow, branches appressed, included in inflated sheath; plants short, cauline leaves short; lemma and palea glabrous; spikelets 2-3 mm long.

REFERENCE: Braun 1967:125 (often from roadsides) (illus. p. 124).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 10 Oct 1891—Georgesville, *Werner* (CLM, OS).

**44. MUHLENBERGIA Schreb. Muhly**

Erect or decumbent; scaly rhizomes usually present; panicles usually narrow, rarely open; spikelets 1-flowered; glumes membranous or hyaline, acute or awned, rarely minute or absent; lemma narrow, often pilose at base, usually 3-nerved, acute, awnless or awned from tip or just below.

a Lemma not pilose at base, the surface minutely pubescent, the tip cuspidate; blades 1-2 mm wide, erect or ascending; tufted, with hard bulblike base, without rhizomes. **7. *M. cuspidata***

a' Lemma pilose at base.

b Second glume not more than 0.5 mm long, first glume minute or wanting; lemma about 2 mm long, awn equaling to twice as long as body; stem weak, decumbent at base. **5. *M. schreberi***

b' Both glumes well developed, half length of lemma or more, with pointed or awned tips; culms erect or reclining; rhizomes with overlapping scales.

c Panicle dense and spikelike; glumes lanceolate, awned, awns exceeding lemma; anthers 1-1.5 mm long.

**6. *M. glomerata***

c' Panicle not dense and spikelike but branches sometimes short and dense.

d Glumes lanceolate, tapering from base to tip, at least one nearly as long as to longer than lemma; scales of rhizome ovate, base cucullate-arched; anthers 0.3-0.6 mm long; lemma of each species awned or awnless.

e Plants much branched, sprawling; internodes glabrous; lemma typically awnless (awned in one form), short-pilose at base; panicles many. **4. *M. frondosa***

e' Plants usually not sprawling; internodes puberulent; lemma long-pilose at base.

f Panicle rather stiff, spikelets short-pedicel or sessile, densely imbricated on short branches; lemma typically awnless (awned in one form). **1. *M. mexicana***

f' Panicle slender and flexuous, branches erect, slender, often elongate, not densely flowered; lemma usually awned. **2. *M. sylvatica***

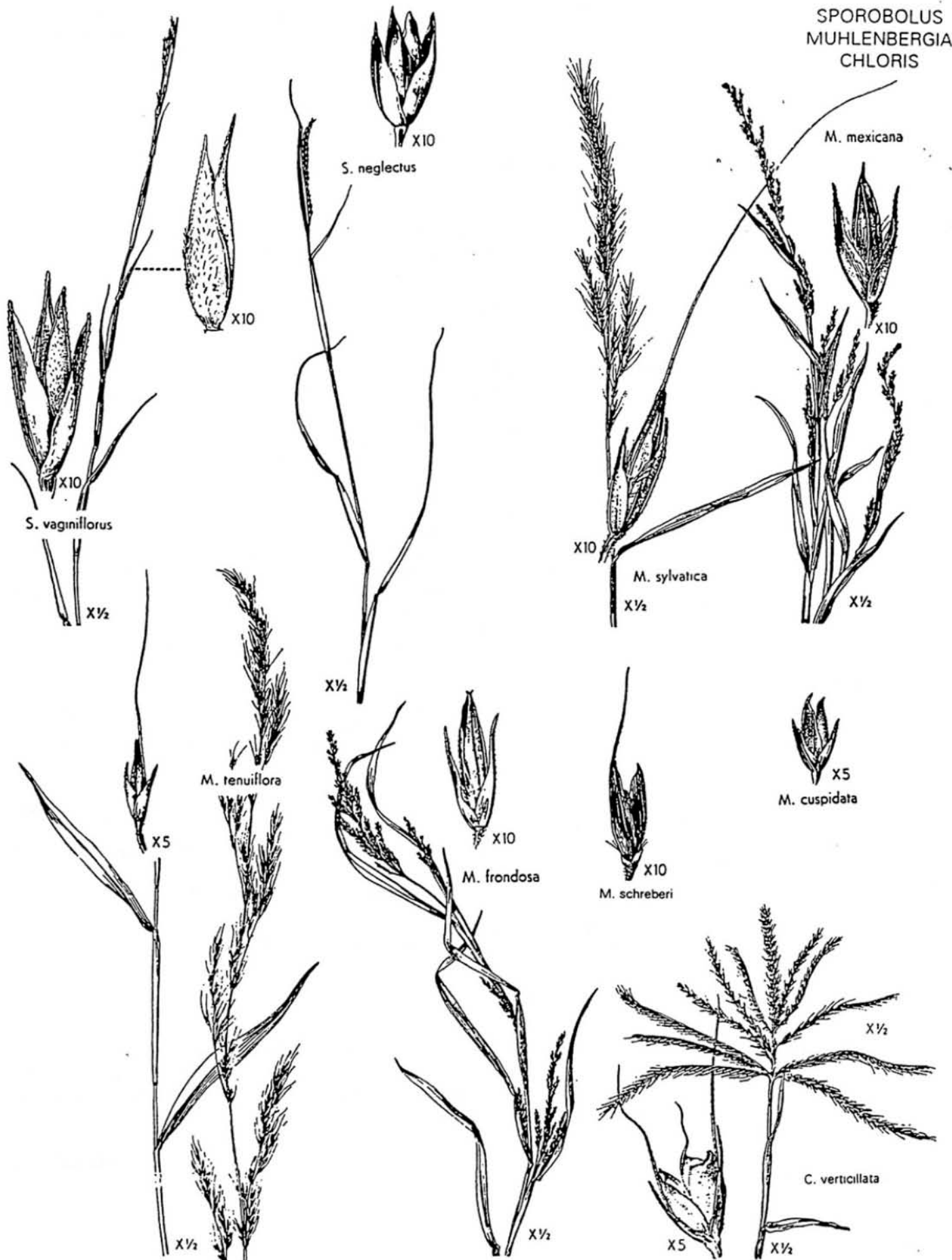
d' Glumes ovate, abruptly pointed, 1/2-3/4 as long as lemma; scales of rhizome narrowly ovate, closely appressed; anther 0.8-1.5 mm long; panicle slender and elongate; culms erect, blades spreading.

**3. *M. tenuiflora***

**1. *Muhlenbergia mexicana* (L.) Trin.**

Wirestem Muhly

SPOROBOLUS  
MUHLENBERGIA  
CHLORIS



Plants not sprawling; internodes puberulent; lemma long-pilose at base; panicle stiff, densely imbricated; lemma awnless. Glumes half length of lemma, with pointed or awned tips. Syn.: *M. mexicana* Trin. var. *filiformis* Torr.  
REFERENCES: Sullivant 1840:48; Selby & Craig 1890:18; Kellerman & Werner 1893:231 (common along the brook and river and land bordering the lagoons, 1 Aug 1890); Braun 1967:121 (thickets, woods, and open ground) (illus. p. 118).  
HERBARIUM RECORDS: 1840—Cols., Sullivant; Sep 1890—Cols., Werner (CLM); 17 Sep 1892—canal S of city, Cols., Werner; 17 Sep 1892—Cols., Werner (BGSU, CLM).

2. *Muhlenbergia sylvatica* (Torr.) Torr.

Forest Muhly

REFERENCES: Sullivant 1840:48; Selby & Craig 1890:18.

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Braun 1967:121.

3. *Muhlenbergia tenuiflora* (Willd.) Britton, Sterns & Poggenb.

Panicle narrow; lemma 3-4 mm long, pilose at base, awn equaling or longer than body; glumes ovate to abruptly pointed, 1/2-3/4 as long as lemma; nodes and at least upper part of internodes pubescent.

REFERENCES: Sullivant 1840:48 (*Muhlenbergia willdenovii* Trin.); Selby & Craig 1890:18 (*Muhlenbergia willdenovii* Trin.).

HERBARIUM RECORD: 1840—Cols., Sullivant.

NOTE: Not mapped for Franklin Co. by Braun 1967:121 (woods) (illus. p. 118).

4. *Muhlenbergia frondosa* (Poir.) Fernald

Panicle not dense, spikelike but branches sometimes short and dense; glumes lanceolate, awned, not longer than lemma; lemma awnless, short-pilose at base; panicles many. Plants much branched, sprawling; internodes glabrous.

REFERENCE: Braun 1967:121 (sometimes a weed) (illus. p. 118).

HERBARIUM RECORDS: 1840—Cols., Sullivant; 9 Sep 1890—Cols., E. V. Wilcox; 6 Sep 1891—Cols., W. Kellerman; 18 Sep 1989—Highbanks Metro Park (Delaware Co.), common in woods, *Watts 490*; 10 Sep 1991—Big Darby Creek off Rt. 40, Prairie Twp., *Lowden 4819*.

5. *Muhlenbergia schreberi* J.F.Gmel.

Nimblewill

Panicle narrow; lemma pilose at base; second glume about 0.5 mm long, first glume minute or wanting; lemma about 2 mm long, awn more than or equaling lemma body. Lawn & alley weed.

REFERENCES: Sullivant 1840:48 (*Muhlenbergia diffusa* Schreb.); Craig 1890:109 (*Muhlenbergia diffusa* Schreb.); Selby & Craig 1890:18 (*Muhlenbergia diffusa* Schreb.); Braun 1967:120 (in lawns and gardens, where often a weed, and in waste places) (illus. p. 118).

HERBARIUM RECORDS: 1840—Cols., Sullivant; 25 Sep 1894—Cols., W. Kellerman; 10 Sep 1898—Cols., W. Kellerman; 3 Oct 1907—Cols., W. Kellerman; 15 Sep 1938—Cols., Stover; 29 Aug 1982—Common, shaded edge of weedy private alley between Blenkner St. & Jackson St., SE Cols. Quad., *Cusick 22050*; 11 Sep 1986—lawns at Ohio Woolgrowers Warehouse, S of I-70 & NNE of jct. of Courtright Rd. & Groves Rd., SE Cols. Quad., *Cusick 25865*; 5 Oct 1988—weedy alley between Calumet Ave. & Indianola Ave., S of Oakland Park, NE Cols. Quad., *Cusick 27884* (MU).

6. *Muhlenbergia glomerata* (Willd.) Trin.

Marsh Muhly

Panicle dense and spikelike; glumes lanceolate, awned, awns exceeding lemma; lemma pilose at base. Culms erect.

REFERENCES: Sullivant 1840:48 (*Polygonum racemosum* Nutt.); Selby & Craig 1890:18; Braun 1967:120 (bogs and wet places) (illus. p. 118).

HERBARIUM RECORDS: 1840—Cols., Sullivant; 24 Aug 1898—OSU Bot. Garden, Cols.; 20 Sep 1901—along the Ohio Canal, Franklin Co., Tyler & C.C.B.

7. †*Muhlenbergia cuspidata* (Torr.) Rydb.

Plains Muhlenbergia

Spikelet with one bisporangiate floret; panicle narrow, not dense, branches ascending; glumes well developed, slightly unequal, about 2 mm long; lemma about 3 mm long, not pilose at base, tip shape pointed; blades about 2 mm wide. Syn.: *M. cuspidata* (Hook.) Rydb., *M. cuspidata* (Nutt.) Rydb.

REFERENCES: Selby 1891a:111a (*Sporobolus cuspidatus* Torr.); Braun 1967:120 (prairies and dry slopes); Stuckey & Roberts 1982:30; McCance 1984:A-43.

HERBARIUM RECORD: 29 Aug 1892—Georgesville, Werner (BGSU, OS).

NOTE: Selby's reference to *Sporobolus cuspidatus* is placed here based on the Werner specimen label (BGSU).

#### 45. CHLORIS Sw. Finger Grass

Perennial; culms short, tufted; sheaths compressed; blades 1-3 mm wide, sometimes aggregated at lower nodes; spikes of inflorescence as much as 10 cm long or more, in 1-3 whorls at and near the tip of the peduncle, the whole inflorescence breaking away at maturity as a tumbleweed; spikelet 3 mm long, containing one perfect floret and an additional lemma which is usually empty, both lemmas awned.

1. \**Chloris verticillata* Nutt.

Windmill Grass

Adventive (native of W U.S.)



Spikelets in rows on one side of rachis; spikes of inflorescence as much as 10 cm long, in 1-2 whorls at the tip of the peduncle; spikelet 3 mm long, containing one perfect floret (whose lemma margin is inconspicuously appressed-pilose) and a wedge-shaped lemma which is usually empty, both lemmas awned.

HERBARIUM RECORD: 1 & 11 Sep 1986—Ohio Woolgrowers Warehouse, S of I-70 & NNE, jct. of Courtright Rd. & Groves Rd., SE Cols. Quad., *Cusick* 25795 (KE, OS) & 25866 (MU).

NOTE: See Weishaupt 1971:28, 293 (addenda). Not treated by Braun (1967).

#### 46. CYNODON Rich.

Perennial, with extensive rhizomes or stolons or both; ligule a ring of hairs; spikelets 1-flowered, in one-sided spike, the spikes, usually 4-5, digitate at tip of main axis; rachilla prolonged, sometimes bearing a rudiment; lemma 2 mm long, boat-shaped, keel pubescent.

##### 1. \**Cynodon dactylon* (L.) Pers.

Bermuda Grass

Adventive (native of the Old World)

Stolons or rhizomes extensive, ligule a ring of hairs; spikelets 1-flowered, in one-sided spike; spikes usually 4-5, digitate at tip of main axis; lemma 2 mm long, boat-shaped, keel pubescent.

HERBARIUM RECORD: 16 Aug 1991—weedy strip along Goodale Ave., locally common, directly W of jct. of Rt. 315, SW Cols. Quad., *Cusick* 29788.

NOTE: Not mentioned for Franklin Co. by Braun 1967:134.

#### 47. SPARTINA Schreb. Cord Grass

Tall stout perennial with horizontal rhizomes; blades long, tapering to slender tip, involute when dry; spikelets laterally flattened, 1-flowered, closely imbricated in one-sided spikes, spikes racemose on main axis; first glume acuminate, shorter than lemma, second glume awned, longer than lemma; lemma keeled, with 2 blunt apical teeth.

##### 1. *Spartina pectinata* Link

Prairie Cord Grass, Slough Grass

Spikelets racemously arranged in rows on one side of rachis; spikelets laterally flattened, imbricated, and containing one perfect floret; first glume acuminate, shorter than lemma; second glume awned, longer than lemma; lemma keeled, toothed at tip; palea almost equalling body of lemma in length.

REFERENCES: Sullivant 1840:48 (*Spartina cynosuroides* Willd.); Selby & Craig 1890:18 (*Spartina cynosuroides* Willd.); Selby 1892a:111 (#1028 Re-collections); Braun 1967:134 (wet prairies, swamps, and coastal marshes) (illus. p. 132).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 7 Jul 1892—Cols., *Bogue*; 12 Jul 1938—Agler Rd., about ½ mi. E of Sunbury Park, Mifflin Twp., *E. Thomas*.

#### 48. BOUTELOUA Lag. Grama

Tufted; blades narrow; spikelet with 1 perfect floret, rachilla prolonged, bearing 1 or more rudiments or a staminate flower; spikelets in short one-sided spikes which are racemose and reflexed on elongate main axis; glumes narrow; lemma narrow, 3-toothed; rudiment 3-awned.

a Spikes many; panicle narrow, of many spreading to pendulous, often secund, short spikes. 1. *B. curtipendula*

a' Spikes 1-4, usually 2; spikelets numerous, closely imbricated.

b Rachis of spike extends conspicuously beyond spikelets. 2. *B. hirsuta*

b' Rachis of spike not exceeding the uppermost spikelet. 3. *B. gracilis*

##### 1. *Bouteloua curtipendula* (Michx.) Torr.

Side-oats Grama

Culms slender, moderately tall, tufted; panicle-branches reflexed; spikelets in many short one-sided spikes, about 1 cm long, racemose and reflexed; lemma about 5 mm long.

REFERENCES: Selby 1891a:111a (*Bouteloua racemosa* Lag.); Braun 1967:135 (illus. p. 136).

HERBARIUM RECORDS: 29 Aug 1892—Franklin Co., *Werner*, Sep 1913—Cols., introduced, *J. H. Schaffner*.

##### 2. \**Bouteloua hirsuta* Lag.

Hairy Grama

Adventive (native to W U.S.)

CYNODON  
SPARTINA  
BOUTELOUA  
PANICUM



Rachis of spike extends conspicuously beyond spikelets.

REFERENCE: Braun 1967:135 (important grasses of the short-grass plains, sometimes adventive eastward, are recorded from Franklin Co.).

HERBARIUM RECORD: 25 Aug 1900—OSU campus, accidental, Tyler.

3. \**Bouteloua gracilis* (Humb., Bonpl. & Kunth) Lag.

Blue Grama

Adventive (native to W U.S.)

Spikelets in several long one-sided upright spikes, about 2-3 cm long; rachis of spike not exceeding the uppermost spikelet.

REFERENCE: Braun 1967:135 (important grasses of the short-grass plains, sometimes adventive eastward, are recorded from Franklin Co.).

HERBARIUM RECORD: 15 Oct 1902—OSU campus, accidental, J. H. Schaffner.

49. PANICUM L. Panic Grass

Inflorescence a panicle; spikelet with 1 perfect floret above, lemma and palea firm to indurate, margins of lemma inrolled around palea; below perfect floret a lemma, which sometimes subtends a palea with or without a staminate flower, and 2 glumes, first glume smaller, second glume about as long as lower lemma, and similar to it in appearance.

- a Basal and cauline leaves similar; without winter rosettes; without an autumnal phase different from vernal phase; culms sometimes branched; flowering once a year; spikelets, glabrous, acuminate to subacute.
- b First glume broad, obtuse or rounded at apex, not more than 1/4 length of spikelet; spikelet lance-ovoid, 2-3.5 mm long; anthers orange; glabrous or blades sparsely hairy; annual. 3. *P. dichotomiflorum*
- b' First glume acuminate or acute at apex, 1/3 to more than 1/2 length of spikelet or sometimes short and blunt when plants are hairy.
- c Lower part of culms compressed, sheaths often keeled; ligule about 1 mm long, membranous; panicle ellipsoid or ovoid, branches densely-flowered; spikelets less than 3 mm long, short-pedicel, crowded on branches, subsecund; perennial, plants tufted.
- d Panicle ellipsoid, lower branches ascending; spikelet 2.5 mm long or more; perfect floret with stipe 0.2-0.4 mm long above remainder of spikelet (*P. stipitatum*). 1. *P. rigidulum*
- d' Panicle ovoid, lower branches divaricate, remote; spikelet less than 2.5 mm long; perfect floret sessile or nearly so (*P. agrostoides*). 1. *P. rigidulum*
- c' Culms rounded, sheaths not keeled; panicles open or diffuse, spikelets rarely crowded.
- e Tall perennial; sheaths glabrous; spikelet 3.5-5.5 mm long, first glume 1/2-3/4 length of spikelet; anthers purple. 2. *P. virgatum*
- e' Annuals; sheaths pubescent.
- f Spikelets acuminate, 3 mm long or more or, if shorter, then panicle half height of plant or more.
- g Spikelets 3-3.5 mm long, narrow; panicle narrowly ellipsoid, 2-3 times as long as wide, branches ascending; blades erect. 4. *P. flexile*
- g' Spikelets mostly less than 3 mm long, rarely to 4 mm; panicle diffuse, as wide as long, terminal one 1/2-2/3 height of plant. 5. *P. capillare*
- f' Spikelets acute, 2-2.5 mm long, often racemose along upper part of branchlets; panicles many, terminal and axillary, ellipsoid, base usually included; blades 6-10 mm wide; culms stout (*P. gattingeri*). 5. *P. capillare*
- a' Cauline blades 20 times as long as wide or more, erect, 5 mm wide or less; without winter rosettes; in autumnal phase, branching from base, small panicles partly hidden among basal leaves. (See a".)
- h Spikelet more than 3 mm long; second glume and lower lemma forming a slightly twisted beak above upper lemma. 6. *P. depauperatum*
- h' Spikelet less than 3 mm long; second glume and lower lemma not forming a beak above upper lemma. 7. *P. linearifolium* var. *linearifolium* has pilose sheaths, var. *wernerii* has glabrous sheaths
- a" Basal leaves usually shorter and wider than cauline; with winter rosettes; vernal phase with unbranched culms and terminal panicles; autumnal phase with branches and panicles from some or all nodes; cauline blades rarely as much as 20 times as long as wide; spikelets usually rounded at apex.
- i Principal cauline blades 15 mm wide or more; nodes sometimes pubescent but not retrorsely bearded.
- j Vernal sheaths papillose-hispid, or at least papillose, rarely glabrous; autumnal sheaths overlapping, bristly-hairy, inflated, enclosing panicles; spikelets 2.7-3 mm long. 10. *P. clandestinum*

- j' Vernal sheaths not or slightly papillose-hispid; autumnal sheaths not bristly-hairy; spikelet 3.4-3.7 mm long, rarely shorter; blades 1.5-4 cm wide. 11. *P. latifolium*
- i' Principal cauline blades less than 15 mm wide, usually not more than 10 times as long as wide.
- k Spikelet more than 2.5 mm long; hairs of spikelet, if present, less than 1 mm long.
  - l Vernal sheaths papillose-hispid, or at least papillose, rarely glabrous; autumnal sheaths overlapping, inflated, enclosing panicles, with bristlelike hairs; spikelets 2.7-3 mm long. 10. *P. clandestinum*
  - l' Without the above set of characters; spikelet obovoid, turgid, blunt, 3-3.5 mm long; second glume and lower lemma strongly nerved; culms and sheaths more or less pubescent, blades not velvety. 12. *P. oligosanthos* var. *scribnerianum*
- k' Spikelet 2.5 mm long or less.
- m Sheaths, at least the upper, glabrous (sometimes ciliate at margin, sometimes pubescent at nodes); culms usually glabrous.
  - n Ligule of hairs 3-5 mm long, clearly visible at base of blade; spikelets 1.3-2.1 mm long. 8. *P. lanuginosum* vars.
  - n' Ligule not more than 1 mm long.
    - o Nodes densely retrorsely bearded; spikelet 1.5-1.8 mm long, usually glabrous; blades 8-15 mm wide (*P. microcarpon*). 9. *P. dichotomum*
    - o' Nodes not retrorsely bearded, sometimes pubescent, or the lower slightly bearded; spikelet 2-2.2 mm long, ellipsoid at maturity, glabrous (rarely pubescent); sheaths not pale-spotted; second glume not longer than, often shorter than, upper lemma. 9. *P. dichotomum*
- m' Sheaths and culms pubescent, hairs varying in length and abundance, villous or papillose-pilose; ligule of dense hairs 2-5 mm long; spikelet 1.3-2.1 mm long, pubescent. 8. *P. lanuginosum* vars.

1. *Panicum rigidulum* Nees

Panic Grass

Panicle inflorescence; articulation below glumes; spikelet with 1 perfect floret above, lemma and palea firm, margins of lemma inrolled around palea; below perfect floret a lemma similar to the second glume; first glume smaller. Spikelets glabrous, acute at apex; lower part of culms compressed; spikelet short-pedicel; panicle ovoid; spikelet less than 2.5 mm long; perfect floret nearly sessile. Syn.: *P. agrostoides* Spreng., *P. stipitatum* Nash

REFERENCE: Braun 1967:151 (wet open places) (illus. p. 152).

HERBARIUM RECORDS: Jul 1891—Cols., Werner, 1892—Cols., Werner (CLM); Jul 1892—low lands bordering the canal S of the city, Cols., Werner.

2. *Panicum virgatum* L.

Switchgrass

Spikelet acuminate at apex, glabrous; culms rounded; sheaths glabrous; spikelet 5.0-6.0 mm long; first glume 1/2-3/4 length of spikelet. Open areas.

REFERENCES: Sullivant 1840:47; Selby & Craig 1890:18; Selby 1891a:111a (#1018 Re-collected); Braun 1967:151 (prairies and open ground) (illus. p. 152).

HERBARIUM RECORDS: 1840—Cols., Sullivant; 25 Oct 1901—Cols., W. Kellerman; 25 Aug 1905—Cols., Fischer; 18 Aug 1939—OSU Botanic Gardens, Cols., Dore; 6 Aug 1987—open areas, Highbanks Metro Park (Delaware Co.), open areas under power lines, Franklin/Delaware Co. line, Watts 392 (OS, OWU).

3. *Panicum dichotomiflorum* Michx.

Fall Panic Grass

Spikelet 2.5-3.0 mm long, acute at apex; first glume broad, obtuse or rounded at apex, less than 1/4 the length of spikelet.

REFERENCES: Sullivant 1840:47 (*Panicum proliferum* Lam.); Selby & Craig 1890:18 (*Panicum proliferum* Lam.); Kellerman & Werner 1893:231 (*Panicum proliferum* Lam., found to be most troublesome weeds in the lawn near the Botanical Bldg., frequently met with on the campus and in the pastures); Braun 1967:150 (illus. p. 152).

HERBARIUM RECORDS: 1840—Cols., Sullivant; 27 Sep 1890—Cols., Werner (CLM); Sep 1894—OSU campus, Cols., & Cols., W. Kellerman; 13 Sep 1895—Cols., Osburn; 10 Sep 1991—Big Darby Creek off Rt. 40, Prairie Twp., Lowden 4811.

4. *Panicum flexile* (Gatt.) Scribn.

Panic Grass, Wiry Witch Grass

Spikelet 3.0 mm long, acuminate at apex; culms rounded; sheaths pubescent; panicle narrowly ellipsoid, 2-3 times as long as wide; blades and branches erect. Syn.: *P. capillare* L. var. *flexile* Gatt.

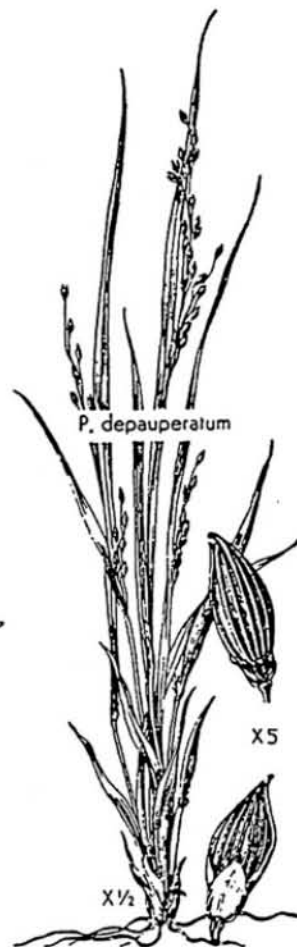
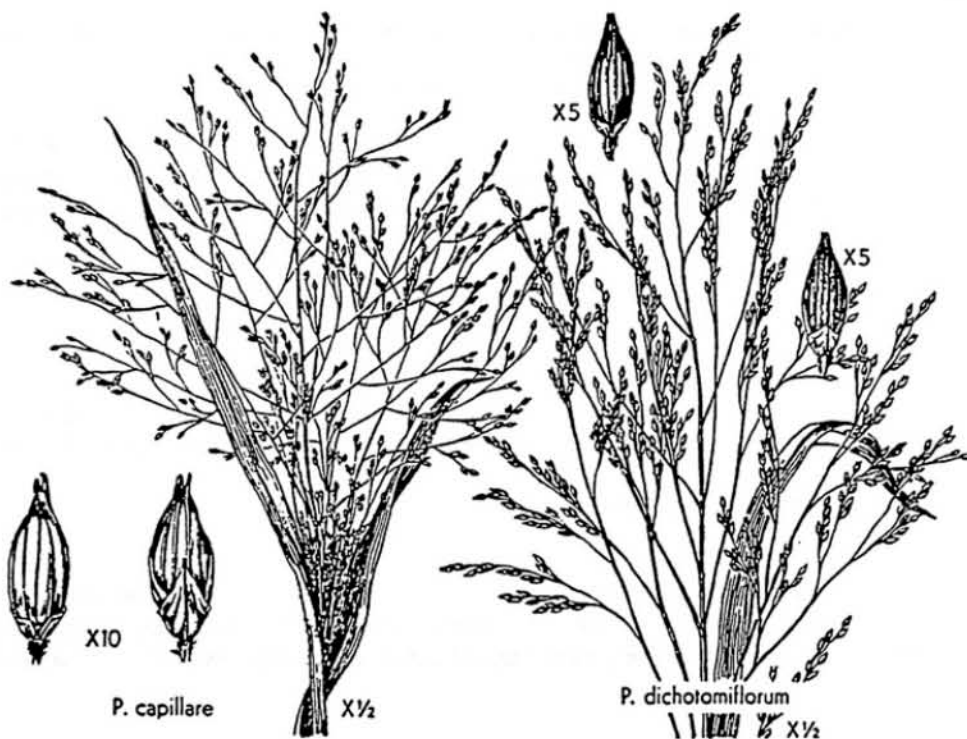
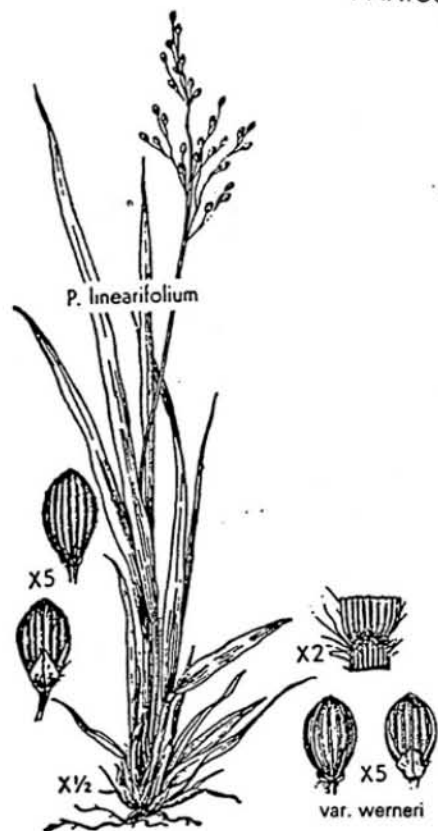
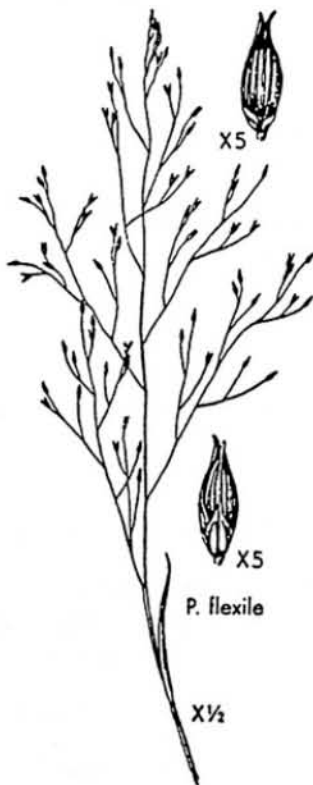
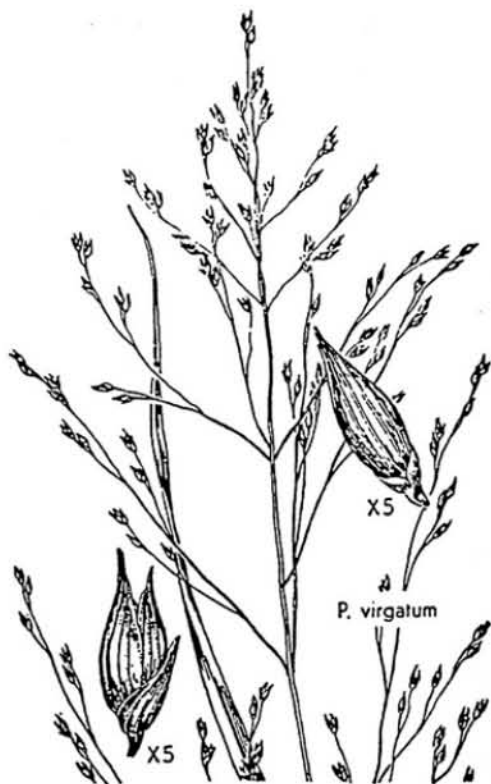
REFERENCES: Werner 1893:93 (Cols., Werner); Braun 1967:153 (mostly damp soil, meadows and open woods, several of our specimens from bogs and swamps) (illus. p. 152).

HERBARIUM RECORDS: 17 Sep 1892—Cols., Werner (CLM); 7 Oct 1893—Cols., Werner (CLM, KE, OS).

5. *Panicum capillare* L.

Old-witch Grass, Witch Grass

PANICUM



Spikelets less than 3.0 mm long, acute or acuminate at apex; culms rounded; panicle open or diffuse; sheaths pubescent. Syn.: *P. gattingeri* Nash

REFERENCES: Sullivant 1840:47; Craig 1890:108 (very abundant on the island N of the central lagoon); Selby & Craig 1890:18; Braun 1967:153 (open ground, waste places, and cultivated soil) (illus. p. 152).

HERBARIUM RECORDS: Jul 1888—Cols., *Craig*; 11 Aug 1890—OSU, Cols., *Hine*; 20 Aug 1890—Cols., *Werner* (CLM); 9 Sep 1890—N Cols., *E. V. Wilcox*; 1897—Cols., *J. H. Schaffner*; 19 Aug 1899—Cols., *Selby*; 28 Oct 1901—Cols., *J. H. Schaffner*; 8 Sep 1905—OSU campus, *Fischer* (KE, OS); 29 Sep 1907—Cols., *W. Kellerman*; 2 Oct 1911—Westerville, old meadows & waste places, *Hanawalt*; 18 Sep 1989—Highbanks Metro Park (Delaware Co.), shale bluffs approx. 200 yards N of the Franklin/Delaware Co. line, *Watts 491* (OS, OWU).

6. †*Panicum depauperatum* Muhl.

\* Starved Panic Grass

REFERENCE: Selby & Craig 1890:18.

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Braun 1967:155.

7. *Panicum linearifolium* Scribn.

Panic Grass

Cauline blades more than 20 times as long as wide, erect, less than 5 mm wide; smaller panicles somewhat hidden among basal leaves; spikelet less than 3 mm long.

Two varieties are recognized:

var. *linearifolium*

Sheaths pilose.

REFERENCE: Braun 1967:155 (illus. p. 154).

HERBARIUM RECORDS: Jun 1890—Georgesville, *Werner* (CLM); 15 Jul 1939—dry shaley ravine, Cols., *Dore*.

var. *wernerii* Scribn.

Similar to the typical var. except sheaths glabrous.

REFERENCE: Braun 1967:155 (illus. p. 154).

HERBARIUM RECORDS: 9 Jun 1907—Worthington, *W. Kellerman*; 1930—Red Hills, opposite Central College, *Chapman & Gordon*.

8. *Panicum lanuginosum* Elliott var. *fasciculatum* (Torr.) Fernald

Panic Grass

Spikelets 1.6-2.0 mm long, rounded at apex, pubescent; sheaths and culms pubescent; ligule of dense hairs up to 7.0 mm long. Meadows and moist roadsides. Syn.: *P. huachucae* Ashe

REFERENCE: Braun 1967:161 (illus. p. 160).

HERBARIUM RECORDS: 27 Jun 1906—Big Darby Creek, *W. Kellerman*; 18 Sep 1927—Black Lick Woods, *E. Thomas*; 28 Jun 1939—meadow, Cols., *Dore*; 15 Jul 1939—moist roadside, Cols., *Dore*; 17 Jul 1971—W of Olentangy River Rd., approx. ½ mi. N of Henderson Rd., Clinton Twp., *Roberts 1344*; 15 Jul 1988—Highbanks Metro Park (Franklin Co.), dry oak woods on top of bluffs, S of Franklin/Delaware Co. line, E of Olentangy R., *Watts 455*; 13 Jun 1990—Gahanna Woods Park, W of Taylor Station Rd., Jefferson Twp., *Lowden 4399*.

9. †*Panicum dichotomum* L.

Panic Grass

Syn.: *P. barbuiatum* Michx., *P. microcarpon* Muhl.

REFERENCES: Sullivant 1840:47 (*Panicum nitidum* Lam., var. *angustifolium* A.Gray & var. *villosum* A.Gray); Craig 1890:108 (common on the island N of the central lagoon); Selby & Craig 1890:18 (& *Panicum nitidum* Michx.).

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Braun 1967:156 (illus. p. 154).

10. *Panicum clandestinum* L.

Panic Grass

Spikelets 3.0-3.1 mm long, containing 1 bisporangiate floret subtended by a vestigial floret consisting of a lemma; lemma firm of perfect floret, inrolled completely around the palea; articulation below glumes; blades more than 15 mm wide; vernal sheaths papillose-hispid.

REFERENCE: Selby & Craig 1890:18.

HERBARIUM RECORD: 20 Jun 1991—Big Walnut Park, between pond and Big Walnut Creek, entrance off Livingston Ave., Truro Twp., *Lowden 4709*.

NOTE: Not mapped for Franklin Co. by Braun 1967:159 (illus. p. 160).

11. *Panicum latifolium* L.

Panic Grass

Spikelet 3.2-3.8 mm long, rounded at apex; principal cauline blades 2 cm wide; nodes pubescent; sheaths slightly papillose-hispid.

REFERENCES: Sullivant 1840:47; Selby & Craig 1890:18; Braun 1967:159 (woods).

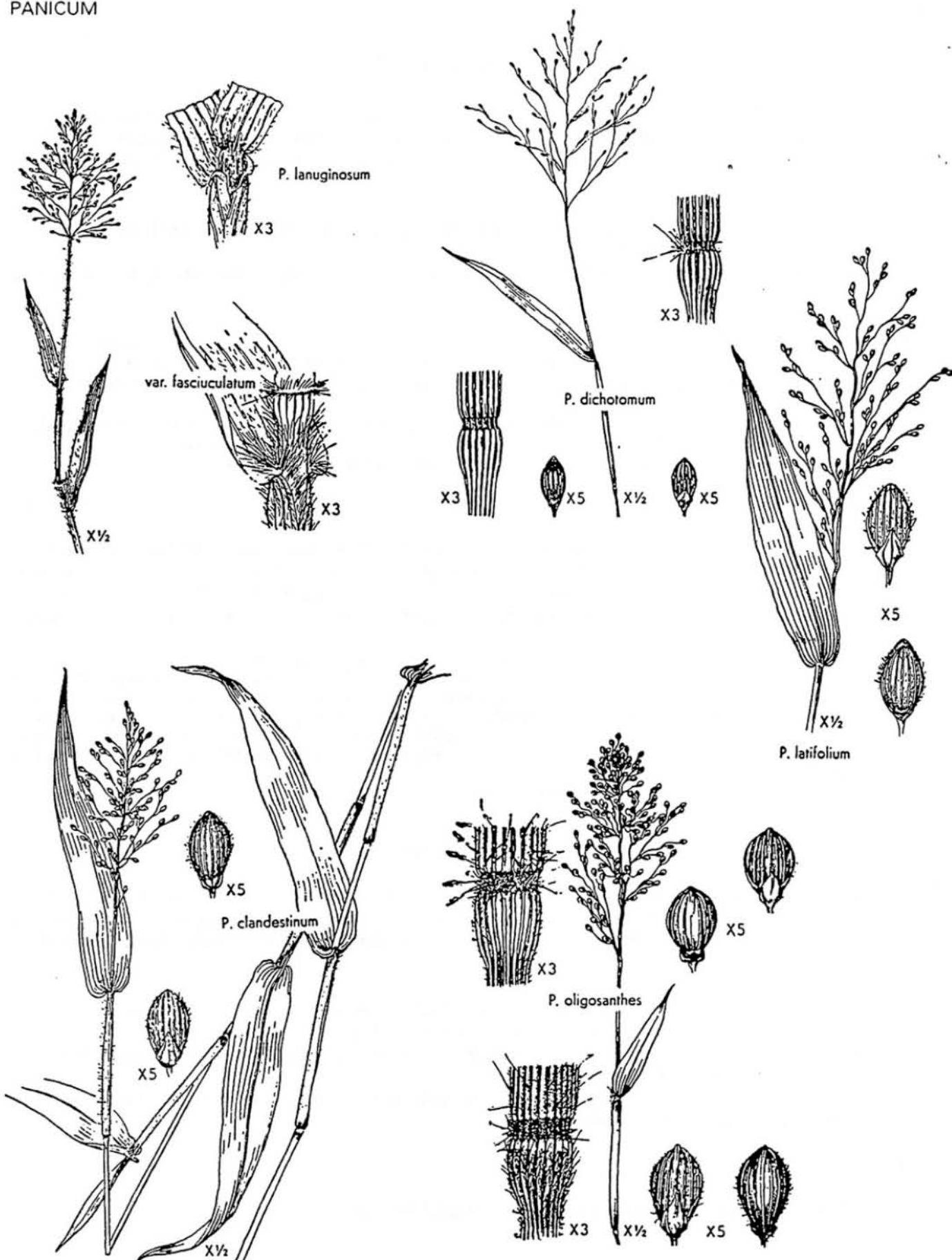
HERBARIUM RECORD: Jun 1922—Big Darby Twp., *E. S. Thomas*.

12. †*Panicum oligoanthes* Schult. var. *scribnerianum* (Nash) Fernald

Prairie Panic Grass

Blades less than 5 mm wide, not more than 10 times as long as wide; spikelet about 3.5 mm long, rounded and blunt at apex; second glume and lower lemma strongly nerved; culms and sheaths pubescent. Syn.: *P. scribnerianum* Nash

PANICUM



REFERENCE: Braun 1967:158.  
HERBARIUM RECORD: 24 Aug 1898—Cols., *W. Kellerman*.

### 50. ECHINOCHLOA P.Beauv.

Coarse annuals, without ligules; inflorescence a panicle of one-sided racemes; spikelets sessile, often spiny-hispid, glumes mucronate or awned; upper floret bisporangiate, lemma and palea firm, lemma inrolled around palea except at tip; lower floret consisting of a lemma which sometimes subtends a palea and sometimes also a staminate flower.

- a Papillose-based hairs of spikelet usually present and abundant; tip of upper lemma merging gradually into lustrous body, firm and sharp. 1. *E. muricata*
- a' Papillose-based hairs of spikelet wanting or confined to margin; tip of upper lemma differing in texture from lustrous body, withering. 2. *E. crusgalli*

#### 1. *Echinochloa muricata* (P.Beauv.) Fernald Barnyard Grass

Similar to *Echinochloa crusgalli*, except for papillose-based hairs of spikelet present and abundant; tip of upper lemma merging gradually into lustrous body, firm and sharp. River banks. Syn.: *E. pungens* (Poir.) Rydb., misapplied  
REFERENCE: Braun 1967:163.

HERBARIUM RECORDS: 1 Sep 1891—Cols., *Werner* (CLM); 17 Sep 1892—Cols., *Werner*; 28 Sep 1911—Westerville, barnyards & waste places, *Hanawalt*; Summer 1988—Olentangy R., OSU campus, Cols., *Delong*; 7 Sep 1991—Antrim Lake; Sharon Twp., *Lowden* 4797.

NOTE: See Voss (1972) who states "appears in many manuals under the incorrect name" *Echinochloa pungens*.

#### 2. \**Echinochloa crusgalli* (L.) P.Beauv. Barnyard Grass

Naturalized (native of Eurasia)

Panicle branches ascending or spreading; spikelets usually not in rows, each containing one bisporangiate floret; 2 florets, one vestigial floret, consisting of a lemma and palea below a bisporangiate upper floret; lower lemma awned or awnless; ligule absent. Papillose-based hairs of spikelet wanting; tip of upper lemma differing in texture from lustrous body. Rubbish dumps, swampy areas, moist woods & ditches, open fields & river banks. Syn.: *Oplismenus crus-galli* P.Beauv., *Panicum crus-galli* L.

REFERENCES: Sullivant 1840:47, 61; Craig 1890:108 (common on the island and in waste places generally); Selby & Craig 1890:18.

HERBARIUM RECORDS: 18 Aug 1892—Cols., *Bogue*; 19 Aug 1899—Cols., *Selby*; 11 Jul 1939—Cols., *Dore*; 3 Nov 1984—Gahanna Woods State Nature Preserve, near the bridge-boardwalk (IV), *Tyrrell*; 6 Nov 1984—Gahanna Woods State Nature Preserve, *Tyrrell*; 12 Nov 1984—Gahanna Woods State Nature Preserve, nearest Taylor Station Rd. (VI), *Tyrrell*; 6 Aug 1987—Highbanks Metro Park (Delaware Co.), open field directly N of Franklin/Delaware Co. line, *Watts* (OS, OWU); Summer 1988—along Big Darby Creek between I-70 & Little Darby Creek, Galloway Quad., *Delong*; Summer 1988—along the Olentangy R., OSU campus, Cols., *Delong*; 5 Aug 1989—along Godown Rd., between Commerce Pl. & Le Anne Marie Circle, Perry Twp., *Lowden* 4237.

NOTE: Not mentioned for Franklin Co. by Braun 1967:163 (illus. p. 164).

### 51. PASPALUM L. Bead Grass

Inflorescence of 2-several spikelike racemes digitate or racemose on the main axis, or rarely of 1 raceme; spikelets usually plano-convex, sessile or petioled, solitary or in pairs in 2 rows on one side of rachis; spikelet with a perfect floret above, lemma and palea firm; first glume usually absent; second glume and lower lemma similar, membranous, with appearance of 2 glumes.

- a Spikelets borne singly, not in pairs, on rachis, 2.5-3.2 mm long, orbicular or broadly oval. 1. *P. laeve*
- a' Spikelets borne in pairs on rachis (one spikelet of pair sometimes vestigial, but pedicel present).
  - b Spikelets about 3 mm long, obovoid, usually lying in 4 rows; racemes usually 4-8; culms decumbent at base, rooting at lower nodes. 2. *P. pubiflorum* var. *glabrum*
  - b' Spikelets 1.8-2.3 mm long, as wide or nearly as wide as long; racemes 1-3, slender; upper surface of blade long-pilose. 3. *P. setaceum* var. *muhlenbergii*

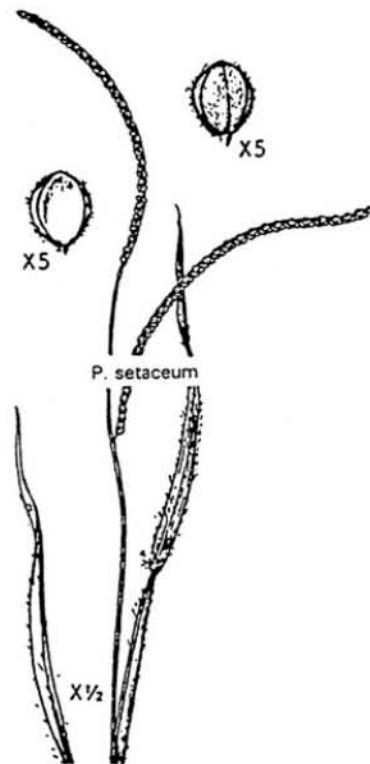
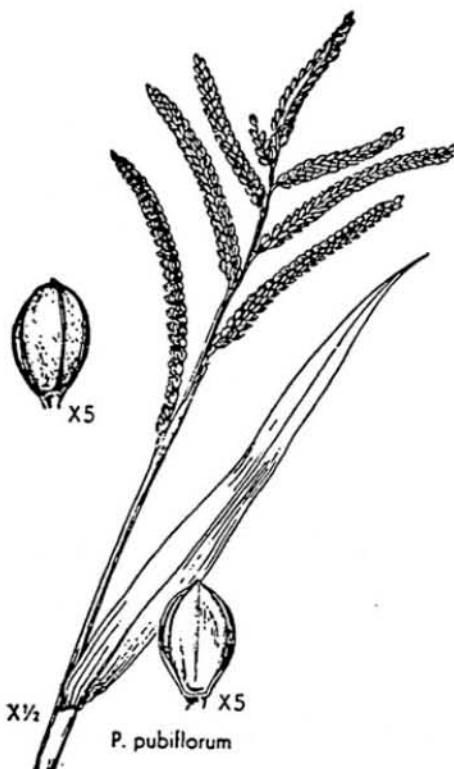
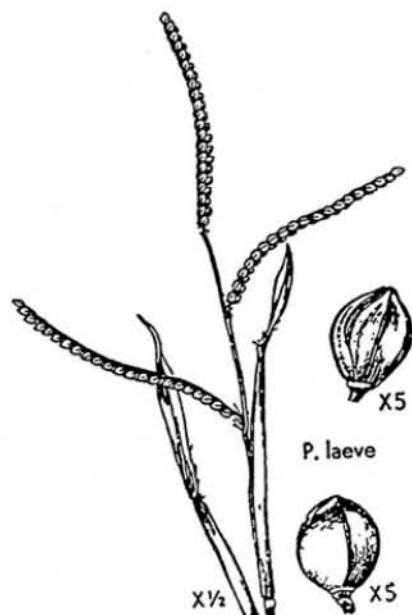
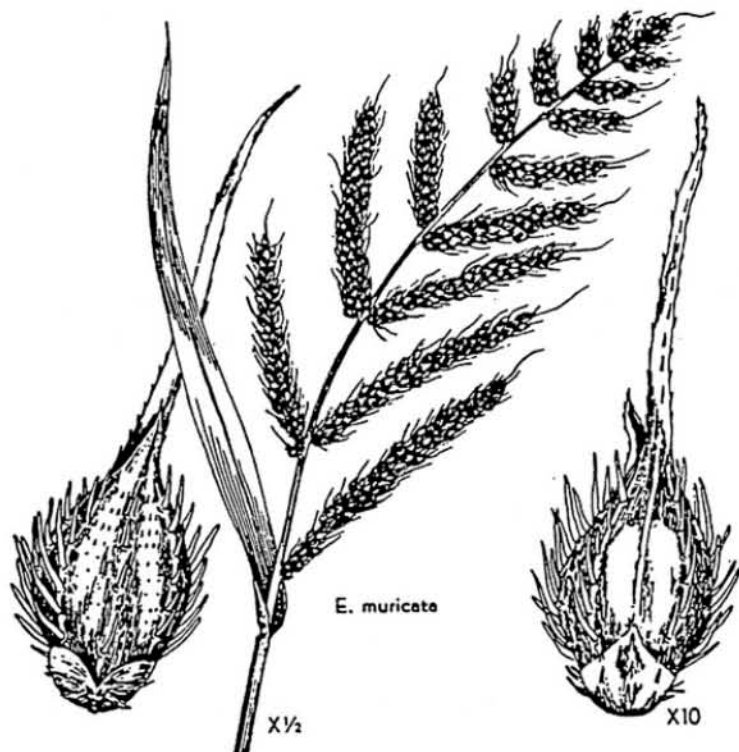
#### 1. \*†*Paspalum laeve* Michx.

Adventive (native of Ohio)

Spikelets borne singly on rachis (not in pairs), 3.0 mm long, orbicular.



ECHINOCHLOA  
PASPALUM



HERBARIUM RECORD: 3 Sep 1992—N side of Walnut St., occasional in mowed grassy field, approx. ½ mi. E of Cabbage Rd., Blendon Twp., New Albany Quad., *McCormac 4887*.

NOTE: Not mapped for Franklin Co. by Braun 1967:146 (illus. p. 144).

2. †*Paspalum pubiflorum* Rupr. var. *glabrum* Vasey

Spikelet 2.5-3.0 mm long; usually lying in 4 rows, culms decumbent at base, rooting at lower nodes. Syn.: *P. laeviglume* Scribn.

HERBARIUM RECORDS: 11 Jun 1970—Eighth Ave., just W of Michigan Ave., along parking lot, Cols., *Weishaupt*; 29 Sep 1991—Scioto Blvd. W side of Scioto R., N of Greenlawn Ave. bridge, Franklin Twp., *Lowden 4865*.

NOTE: Not mapped for Franklin Co. by Braun 1967:145 (illus. p. 144).

3. *Paspalum setaceum* Michx. var. *muhlenbergii* (Nash) D.J.Banks

Spikelets in pairs on one side of rachis; below perfect floret a lemma and second glume, all membranous; spikelet plano-convex, apex blunt; lemma of perfect floret hard, margins inrolled. Spikelet 2.2 mm long; upper surface of blade long-pilose. Lawns. Syn.: *P. ciliatifolium* Michx. var. *muhlenbergii* (Nash) Fernald

REFERENCE: Braun 1967:145 (roadsides and fields) (illus. p. 144).

HERBARIUM RECORD: 14 Sep 1954—Cols., *Haws*.

## 52. SETARIA P.Beauv. Foxtail Grass

Annuals; inflorescence a cylindrical bristly spikelike panicle; spikelet with upper bisporangiate floret and lower lemma enclosing a hyaline palea and sometimes a staminate flower; one or more slender bristles below each spikelet; abortive spikelets sometimes present; lemma and palea of perfect floret chartaceous.

- a Bristles downwardly barbed, short, 1 per spikelet; spikelet about 2 mm long; second glume about 3/4 as long as upper lemma. 2. *S. verticillata*
- a' Bristles upwardly barbed; bristles 1-many below each spikelet.
  - b Second glume 1/2-2/3 as long as rugose upper lemma; spikelet about 3 mm long and 2 mm wide; bristles 5-20 below each spikelet; panicle yellow at maturity. 1. *S. glauca*
  - b' Second glume 3/4 to as long as slightly rugose upper lemma; 1-several bristles below each spikelet.
    - c Panicle somewhat lobed (obviously branched), often more than 1 cm thick, excluding bristles, variously colored, often red or purple; at maturity, upper lemma, palea, and grain falling away from remainder of spikelet. 5. *S. italica*
    - c' Panicle usually not lobed, usually 1 cm or less thick, excluding bristles, usually green; at maturity, whole spikelet deciduous from pedicel.
      - d Panicle usually 7 cm long or less; spikelet 2-2.5 mm long; bristles 1-3 below each spikelet; blades glabrous. 4. *S. viridis*
      - d' Panicle longer, usually conspicuously nodding; spikelet 2.5-3 mm long; bristles often 3-6 below each spikelet; blades usually pubescent, at least above. 3. *S. faberi*

1. \**Setaria glauca* (L.) P.Beauv.

Yellow Foxtail Grass, Bottle Grass

Naturalized (native of Europe)

Spikelet containing one bisporangiate floret subtended by a vestigial floret consisting of lemma and palea; spikelet with involucre of bristles. Bristles upwardly barbed, many; second glume 1/2-2/3 as long as rugose upper lemma; spikelet 3.0 mm long; panicle dense; yellow at maturity. Wasteland and open fields. Syn.: *S. lutescens* sensu F.T.Hubb., *Pennisetum glaucum* Nutt.

REFERENCES: Sullivant 1840:47, 61 (naturalized plants); Craig 1890:108 (common in fields, growing in waste places, along fences, etc.); Selby & Craig 1890:18.

HERBARIUM RECORDS: 1834—Worthington, *J. Paddock Collection* (ILL., a mixed collection with *Setaria viridis*); 20 Aug 1939—wasteland, Cols., *Dore*; 6 Aug 1987—open fields, Highbanks Metro Park (Delaware Co.), *Watts*; 6 Aug 1991—OSU Campus, Fawcett Center for Tomorrow, parking lot weed, *Lowden 4788*; 10 Sep 1991—along Rt. 40 W of Alton, 1 mi. E of Amity Rd., Prairie Twp., *Lowden 4824*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:165 (common in Ohio; cultivated fields, roadsides, waste places) (illus. p. 164).

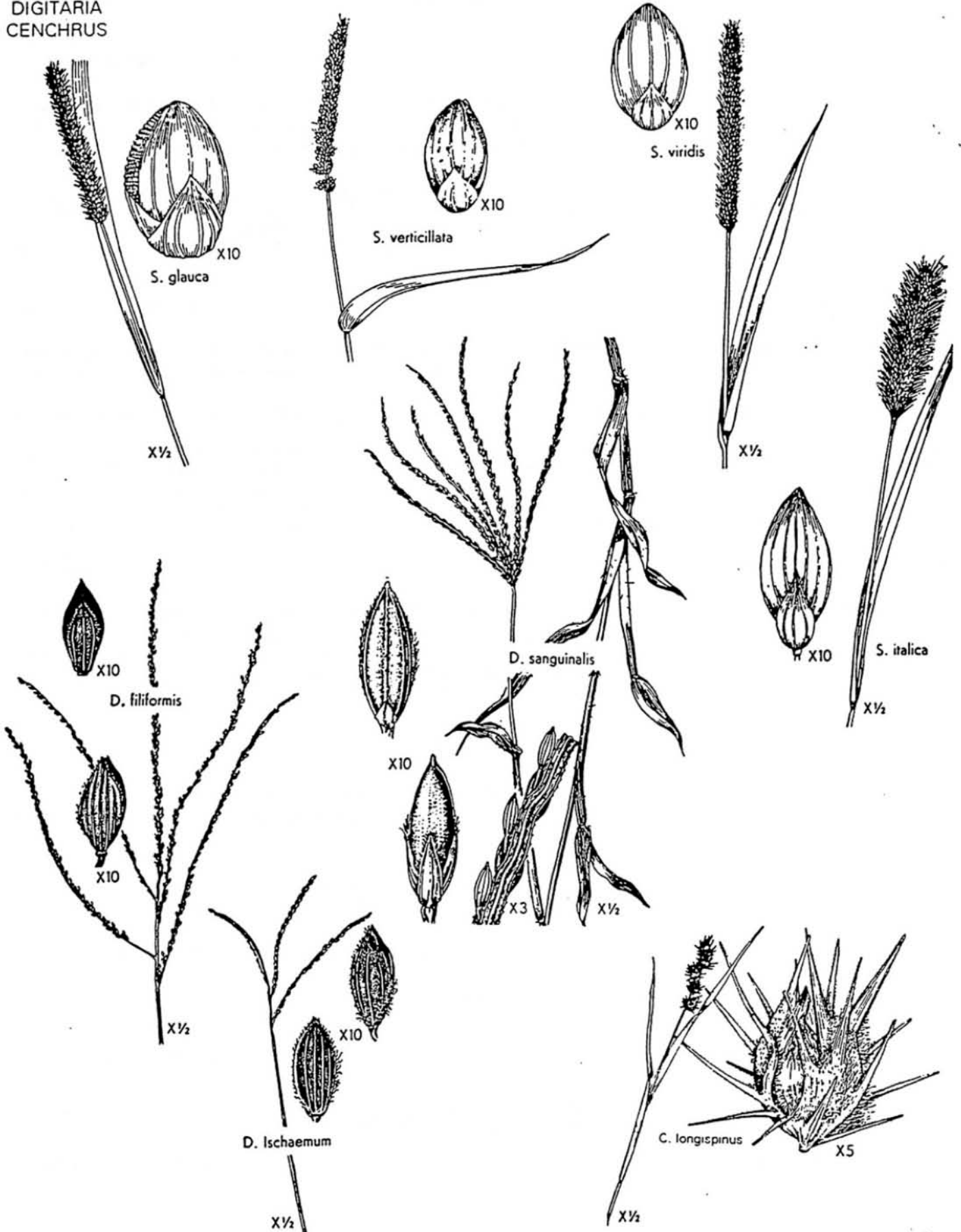
2. \**Setaria verticillata* (L.) P.Beauv.

Bur Foxtail Grass

Naturalized (native of the Old World)

Bristles downwardly barbed, short, 1 per spikelet; second glume 3/4 to as long as upper lemma. Garden weed, waste places and sidewalks.

SETARIA  
DIGITARIA  
CENCHRUS



HERBARIUM RECORDS: 10 May 1897—greenhouse, Cols., *W. Kellerman*; 26 Sep 1936—waste ground and sidewalks, Cols., *J. H. Schaffner*; 26 Jul 1939—Cols., garden weed, *Dore*; 2 Oct 1979—in alley between 12th Ave. & 13th Ave., just E of Indianola, Cols., *W. Carr* (KE)

NOTE: Not mentioned for Franklin Co. by Braun 1967:165 (locally common in waste and cultivated ground, often in alleys and elsewhere near habitation).

3. *\*Setaria faberi* R.A.W.Herrm.

Nodding or Giant Foxtail Grass

Naturalized (native of E Asia)

Spikelet containing one bisporangiate floret subtended by a vestigial floret consisting of lemma and palea; spikelet with involucre of bristles. Bristles upwardly barbed; panicles not lobed, usually green at maturity, 13 cm long, nodding; spikelet 2.5 mm long, subtended by various bristles; second glume 3/4 as long as upper lemma; blades pubescent above.

HERBARIUM RECORDS: [ca. 1982]—Blendon Woods, *Owens*; 15 Jul 1988—sandbars along Olentangy R., Highbanks Metro Park (Delaware Co.), *Watts 450* (OS, OWU); 7 Sep 1991—Antrim Lake, Sharon Twp., *Lowden 4796*; 31 Aug 1992—S end of Cleveland Ave. at I-670, just S of First Ave., common in gravelly waste area along abandoned RR tracks, Franklin Twp., SE Cols. Quad., *McCormac 4860*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:165 (it has spread rapidly in Ohio during about the last fifteen years as a weed in cultivated and waste ground).

4. *\*Setaria viridis* (L.) P.Beauv.

Wild Timothy, Green Foxtail

Naturalized (Eurasian)

Bristles upwardly barbed, 1-3 below each spikelet; spikelet 2.0-2.5 mm long; second glume 3/4 to as long as under slightly rugose lemma; blade glabrous; panicle usually not more than 7 cm long. Weed in open areas. Syn.: *Pennisetum viride* Nutt.

REFERENCES: Sullivant 1840:47 (naturalized plants); Craig 1890:108 (more common than [*Setaria glauca*] with which it is frequently found; in cultivated grounds near the nursery).

HERBARIUM RECORDS: 1834—Worthington, *J. Paddock Collection* (ILL, a mixed collection with *Setaria glauca*); 27 Jul 1887—Cols., *Werner* (CLM); Jul 1888—Cols., *Craig*; 28 Jul 1890—Cols., *Hine*; 28 Jul 1890—OSU, Cols., *Hine*; 22 Sep 1892—Cols., *Werner* (BGSU, OS); 14 Sep 1894—Cols., *W. Kellerman*; 19 Aug 1899—Cols., *Selby*; 30 Sep 1907—Cols., *W. Kellerman*; 3 Jul 1939—weed in open soil, Cols., *Dore*; 4 Oct 1988—common, weedy ground, Ohio State Fairgrounds, N of E. 11th Ave., NE Cols. Quad., *Cusick 27882* (MU, OS).

NOTE: Not mentioned for Franklin Co. by Braun 1967:165 (common in Ohio, cultivated fields, roadsides, waste places, often a weed) (illus. p. 164).

5. *\*Setaria italica* (L.) P.Beauv.

Italian or Hungarian Millet

Naturalized (introduced from Eurasia)

Bristles upwardly barbed, several below each spikelet; second glume 3/4 to as long as slightly rugose upper lemma; panicle lobed or branched, thick, often reddish-purple at maturity. Abandoned fields, wasteland.

HERBARIUM RECORDS: 1889—Cols., *Weed*; Aug 1892—Cols., *Werner* (BGSU); 16 Aug 1892—Cols., *Bogue*; 20 Aug 1939—wasteland, Cols., *Dore*; 8 Aug 1990—abandoned field, N side of Scioto Darby Creek Rd., jct. with Amity Rd., Brown Twp., *Lowden 4520*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:166 (escaped, roadsides and waste places).

### 53. DIGITARIA Haller f. Crab Grass

Annual; spikelets sessile or short-pedicel, in 2's or 3's or rarely solitary, in 2 rows in one-sided spikelike racemes, these racemes in 1 or more whorls or somewhat racemose at summit of peduncle; first glume minute or absent; second glume and lower lemma of like texture, membranous.

a Second glume 3/4 to nearly as long as dark purple lemma of perfect floret.

b Rachis triangular, scarcely winged; spikelets sometimes in 3's; lower sheaths pubescent; usually erect.

1. *D. filiformis*

b' Rachis obviously winged; spikelets single or in 2's; sheaths usually glabrous; usually spreading and decumbent.

2. *D. ischaemum*

a' Second glume about half as long as greenish lemma of perfect floret; rachis winged; blades and lower sheaths usually hairy. 3. *D. sanguinalis*

1. †*Digitaria filiformis* (L.) Koeler

Crab Grass, Slender Finger Grass

Syn.: *D. filiformis* Elliott

REFERENCES: Sullivant 1840:47; Selby & Craig 1890:18 (*Panicum filiforme* L.).

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Braun 1967:142.

2. *\*Digitaria ischaemum* (Schreb.) Muhl.

Small or Smooth Crab Grass

Naturalized (native of Eurasia)

Spikelets in rows on one side of rachis; first glume not obvious, second glume well developed; 2 florets, the lower of one lemma only and the upper perfect. Spikelets single or in 2's, second glume nearly as long as lemma of perfect flower; pedicel roundish not decurrently winged; sheaths mostly glabrous.

REFERENCES: Sullivant 1840:47 (*Digitaria glabra* Roem. & Schult.); Selby & Craig 1890:18 (*Panicum glabrum* Gaudin, introduced); Kellerman & Werner 1893:231 (*Panicum glabrum* Gaudin, found to be most troublesome weeds in the lawn near the Botanical Bldg., formed large unsightly mats, frequently met with on the campus and in the pastures).

HERBARIUM RECORDS: 1840—Cols., Sullivant; Aug 1890—Cols., Werner (CLM, OS); 18 Sep 1989—Highbanks Metro Park (Delaware Co.), base of bluffs approx. ¼ mi. N of Franklin/Delaware Co. line, *Watts 492* (OWU).

NOTE: The references to *Panicum glabrum* have been placed here based on Werner's specimens (CLM). Not mentioned for Franklin Co. by Braun 1967:142 (a common and troublesome weed; lawns, gardens, roadsides, waste places).

3. \**Digitaria sanguinalis* (L.) Scop.

Common Crab Grass, Finger Grass

Naturalized (native of Europe)

Spikelets in 2's, second glume about half as long as lemma of perfect floret, pedicel triangular with decurrent wings, sheaths usually hairy. Troublesome weed.

REFERENCES: Sullivant 1840:47; Craig 1890:108 (*Panicum sanguinale* L., Crab-grass, Finger grass; common S of the botanical bldg.); Selby & Craig 1890:18 (*Panicum sanguinale* L., introduced species).

HERBARIUM RECORDS: 30 Jul 1890—Cols., Hine; Aug 1907—Cols., W. Kellerman; 8 Sep 1911—½ mi. E of Westerville, gardens, cultivated fields, *Hanawalt*; 18 Sep 1989—Highbanks Metro Park (Delaware Co.), base of bluffs approx. ¼ mi. N of the Franklin/Delaware Co. line, *Watts 492*; 24 Jul 1991—OSU Campus, behind B&Z bldg., along walkway to College of Biological Sciences, Clinton Twp., *Lowden 4785*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:142 (lawns, gardens, roadsides, waste places, a common and troublesome weed) (illus. p. 144).

54. CENCHRUS L. Sandbur Grass

Inflorescence a spike-like raceme of burs, the bur with subglobose body 4-5 mm wide, usually enclosing 2 spikelets, falling from axis without breaking open; spikelet with upper bisporangiate floret, lemma and palea firm, and a lower staminate or vestigial floret.

1. *Cenchrus longispinus* (Hack.) Fernald

Field Sandbur, Common Sandbur

Spikelets enclosed in prickly subglobose hairy burs; spines flat, spreading or reflexed, more than 40, emerging at irregular intervals. In cinders of abandoned RR yards. Syn.: *C. pauciflorus* Benth.

REFERENCES: Selby & Craig 1890:17 (*Cenchrus tribuloides* L.); Braun 1967:166 (illus. p. 164).

HERBARIUM RECORDS: 11 Sep 1898—5th Ave. at Sellsville, Cols., W. Kellerman; 29 Sep 1973—abandoned RR yards along Scioto R. at Grandview Ave. exit, Cols., *Roberts 4288*; 5 Aug 1979—along RR yard just S of Goodale Ave. between Grandview Ave. & Olentangy R., Cols., W. Carr 1847.

55. SORGHUM Moench

Racemes short, inflorescence appearing a usual panicle; sessile spikelet of pair ovoid, consisting of a perfect floret and a lower lemma with a staminate or a vestigial flower, glumes indurate, lemma hyaline, with bent spiral awn, palea of similar texture or absent; pedicel spikelet narrow, with a staminate or a vestigial floret.

a Perennial with extensive rhizomes; blade usually less than 2 cm wide, white midrib prominent. 1. *S. halepense*

a' Annual; blades often more than 2 cm wide. 2. *S. bicolor*

1. \**Sorghum halepense* (L.) Pers.

Johnson Grass

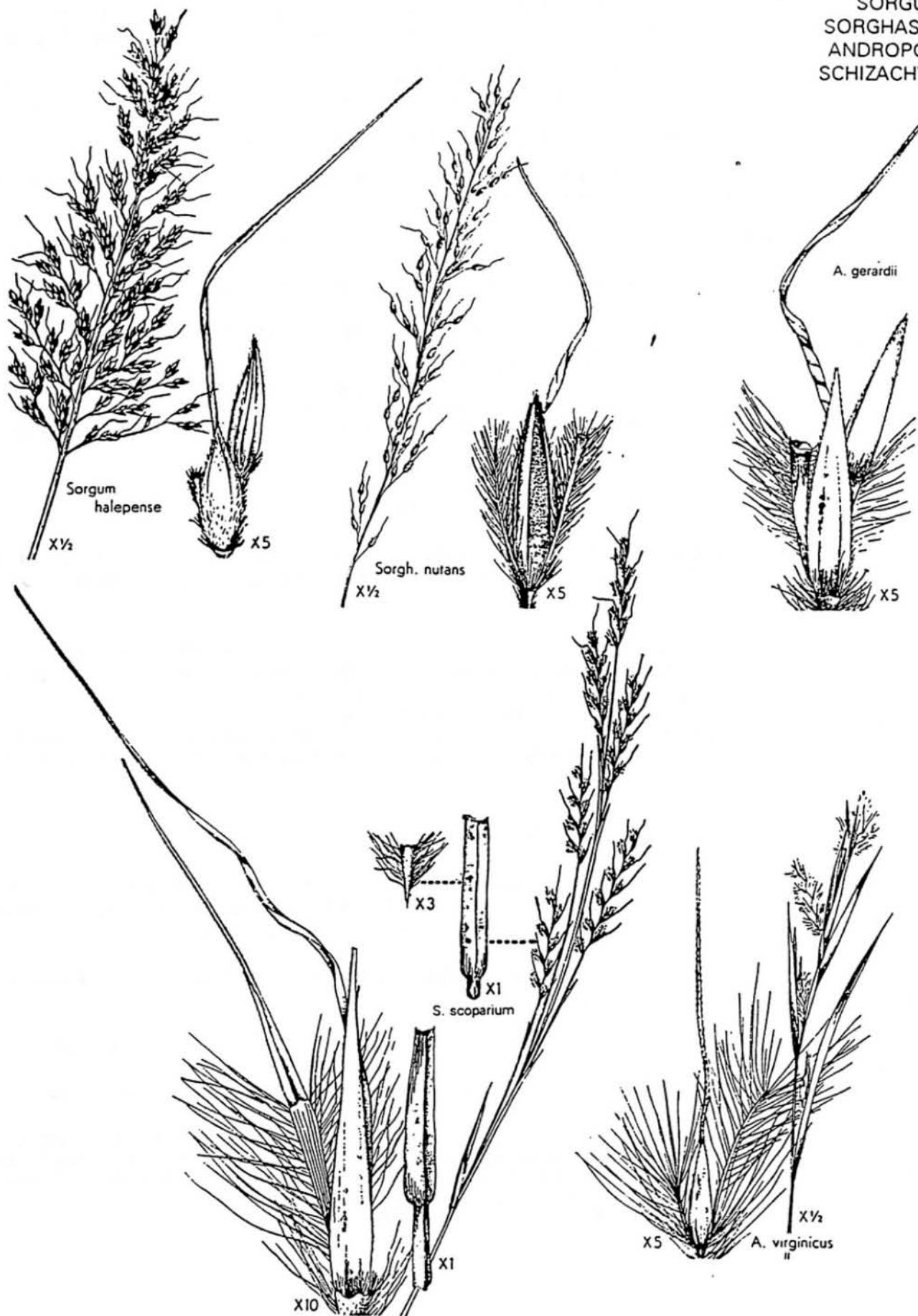
Naturalized (native to the Mediterranean region)

Similar to the preceding; perennial, rhizomes extensive; spikelets not visibly awned; blades usually less than 2 cm wide, light midrib.

HERBARIUM RECORDS: 15 Sep 1894—N of Hayes Hall, OSU campus, Cols., W. Kellerman; 16 Aug 1898—OSU Bot. Garden, cult., J. H. Schaffner; 18 Aug 1952—along road from Cols. to Grove City, *Weishaup*; [ca. 1982]—Blendon Woods, *Owens*; 14 Aug 1982—Blendon Woods, *Owens*; 31 Jul 1990—Starret Rd., just N of Henderson Rd., near Olentangy R., Clinton Twp., *Lowden 4457*; 8 Aug 1990—entrance to Olen Sand etc., Amity Rd. just S of Beach Rd., ¼ mi. N of Patterson Rd. jct., Brown Twp., *Lowden 4522*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:173 (a troublesome weed in Ohio).

SORGUM  
SORGHASTRUM  
ANDROPOGON  
SCHIZACHYRIUM



2. \**Sorghum bicolor* (L.) Moench

Sugar Sorghum

Adventive (introduced from Eurasia, originally African)

Spikelets in pairs, one sessile, containing a bisporangiate floret (plus a vestigial one) the other pediceled with a staminate or a vestigial floret. Stout annual grass, blades usually more than 2 cm wide; spikelet often with visible bent awns. Syn.: *S. vulgare* Pers. (illegitimate name)

HERBARIUM RECORDS: 1 Jun 1909—OSU farm, *F. Huston*; Sep 1912—OSU fields, *L. Humphrey*; Sep 1913—Cols., cult., *L. Humphrey*; 11 Sep 1986—scattered along RR behind Ohio Woolgrowers warehouse, S of I-70 & NNE of jct. of Courtright Rd. & Groves Rd., SE Cols. Quad., *Cusick 25863*.

NOTE: Not mentioned for Franklin Co. by Braun 1967:173 (sometimes spontaneous but probably not persistent). Woss (1972) considered *Sorghum vulgare* an illegitimate name.

56. SORGHASTRUM Nash Indian Grass

Tall perennial with narrow yellow or brown terminal panicle; racemes of panicle short; at each node of rachis a pedicel usually without a spikelet and a sessile spikelet with 1 perfect floret and a lower lemma, glumes coriaceous, lemma hyaline; lemma of perfect floret awned, awn bent; spikelets and pedicels hairy.

1. *Sorghastrum nutans* (L.) Nash

Indian Grass

Spikelets in pairs, one sessile, containing a bisporangiate floret (plus a vestigial one), the other on a pedicel without a spikelet; first glume hirsute; second glume glabrous, enclosing the bisporangiate floret; lemmas thin and hyaline, the fertile one ending in a bent and twisted awn; terminal spikelet usually with 2 sterile pedicels; panicle yellow-brown, spikelets and pedicels hairy. Syn.: *Andropogon nutans* L.

REFERENCES: Sullivant 1840:50; Selby & Craig 1890:17 (*Chrysopogon nutans* Benth.); Braun 1967:173 (prairies, open woods) (illus. p. 172).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; Sep 1890—OSU grounds, *Werner*; Sep 1890—Cols., *Werner* (CLM); 29 Aug 1892—Georgesville, *Werner*; 23 Sep 1934—Bexley, *E. Thomas*; 4 Sep 1936—N of Dublin, *Gordon*.

57. ANDROPOGON L. Beard Grass, Bluestem

Culms solid; spikelets in racemes, the racemes paired or digitate on terminal peduncles or on peduncles arising from axils of spathelike leaves, the whole inflorescence then a panicle or corymb of racemes; spikelets paired at nodes, one sessile with a perfect floret and a lower hyaline lemma, one pediceled with a staminate or a rudimentary floret or without a floret; rachis and pedicel often villous.

a Tall to very tall; racemes 2-6 at tip of peduncle; axillary peduncles few; pediceled spikelet staminate, awnless.

1. *A. gerardii*

a' Moderately tall; racemes usually 2, rarely 3-4, on each peduncle, delicate; axillary peduncles several to many; rachis-segments and pedicels bearing long white hairs; pediceled spikelet vestigial or only a pedicel. 2. *A. virginicus*

1. *Andropogon gerardii* Vitman

Wood Grass, Big Bluestem, Turkey-foot

Spikelets in racemes, the racemes solitary, paired or digitate; glumes firmer than lemmas; spikelets paired, one sessile and the other pediceled; rachis and pedicel often villous. Plant tall to very tall; racemes 2-6 at tip of peduncle; axillary peduncles few; pediceled spikelet staminate, awnless. Bottomland, prairies, fields & roadsides. Syn.: *A. furcatus* Muhl.

REFERENCES: Sullivant 1840:50; Selby & Craig 1890:17; Braun 1967:169 (illus. p. 168).

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 29 Aug 1892—Georgesville, *Werner* (CLM, OS); 23 Sep 1934—Bexley, *E. Thomas*; 26 Jul 1939—Cols., *Dore*; 25 Jul 1992—OSU prairie plant reserve, jct. of Kinneer Rd. & North Star Ave., Clinton Twp., *Lowden 5003*.

2. *Andropogon virginicus* L.

Broom-sedge

Moderately tall; usually 2 racemes on each peduncle; rachis and pedicels bearing long white hairs; sheaths subtending peduncles little or not inflated, scattered, whole inflorescence elongate; awn of fertile lemma straight; sessile spikelet 3-4 mm long. Roadsides, "old fields, pastures; sometimes a weed."

REFERENCES: Sullivant 1840:50; Selby & Craig 1890:17; Braun 1967:171 (illus. p. 170).

HERBARIUM RECORDS: 25 Nov 1923—S of Winchester, *J. H. Schaffner*; 27 Mar 1938—Indian Springs, Cols., *J. H. Schaffner*; 14 Dec 1959—beside ROTC Bldg., OSU campus, *Cusick*; [ca. 1982]—Blendon Woods, *Owens*; 24 Oct 1990—Highbanks Metro Park (Delaware Co.), ¼ mi. W of Rt. 23, open field, directly N of Franklin/Delaware Co. line, *Watts 532* (OS, OWU); 12 Sep 1991—Hoover Dam Park, W of Cabbage Rd., cemetery lot along Walnut St., Blendon Twp., *Lowden 4840*.

## 58. SCHIZACHYRIUM Nees

Moderately tall, culms slender; inflorescence elongate, paniculate, of usually many racemes from axils of upper sheaths; racemes solitary at tip of each peduncle; spikelets paired at nodes; sessile spikelet 6-8 mm long; pedicel spikelet vestigial or staminate; rachis and pedicel villous.

### 1. *Schizachyrium scoparium* (Michx.) Nash

Little Bluestem

Moderately tall; one raceme on each peduncle; axillary peduncles several to many. Dry grasslands. Syn.:

*Andropogon scoparius* Michx., *Chrysopogon nutans* Benth., *Sorghum nutans* A. Gray

REFERENCES: Sullivant 1840:50; Craig 1890:108 (#453, I found a clump of this last summer along the island N of the road); Selby & Craig 1890:17; Kellerman & Werner 1893:227; Braun 1967:169 (illus. p. 168).

HERBARIUM RECORDS: 1840—Cols., Sullivant; Oct 1891—Georgesville, Werner (CLM); 29 Aug 1892—Georgesville, Werner (CLM).

## SPARGANIACEAE, Bur-reed Family

### 1. SPARGANIUM L. Bur-reed

In mud or shallow water; stems erect; leaves alternate, 2-ranked, linear; flowers monosporangiate, in globose sessile or subsessile heads in or above axils of bracts the lower of which are usually leaflike; staminate heads above the carpellate, in spikes; staminate flowers of 3 or more stamens mixed with small scales; carpellate flowers with perianth of 3-6 scalelike parts, carpels 2, united, locules 1 or 2, style 1, fruit 1-2-seeded.

#### a Stigmas 2. 1. *S. eurycarpum*

#### a' Stigma 1.

#### b Carpellate heads axillary.

c Bracts ascending; middle leaves keeled; stigma 2-4 mm long; body of fruit 5 mm long or more, lustrous.

#### 2. *S. androcladum*

c' Bracts spreading; leaves not or weakly keeled; stigma 1-2 mm long; body of fruit 5 mm long or less, dull.

#### 3. *S. americanum*

b' At least one carpellate head supra-axillary, its peduncle fused with stem for a distance above axil; rare.

#### 4. *S. chlorocarpum*

### 1. *Sparganium eurycarpum* Engelm.

Giant Bur-reed

Stigmas 2; achenes large, angled.

REFERENCES: Craig 1890:106 (frequent in the swamp N of the island, 1 Jun 1885, 15 May 1887); Selby & Craig 1890:16.

HERBARIUM RECORDS: 30 May 1896—Reservoir Park, M. Wright; 25 May 1982—OSU campus, along Olentangy R., near Lane Ave. bridge, behind Fawcett Center for Tomorrow, between Ackerman Rd. & Lane Ave., growing in marsh, Cols., Grieve 59; 7 Jun 1991—Boyer Park, at end of Park St., E of Rt. 3, Blendon Twp., Westerville, Lowden 4669.

NOTE: Not mapped for Franklin Co. by Braun 1967:23 (illus. p. 21).

### 2. †*Sparganium androcladum* (Engelm.) Morong

Keeled or Branching Bur-reed

Syn.: *S. lucidum* Fernald & Eames, *S. simplex* Huds. var. *androcladum* Engelm.

REFERENCE: Selby & Craig 1890:16.

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Braun 1967:23 (illus. p. 22). Could this be *Sparganium chlorocarpum* and not *Sparganium androcladum*, a doubtful species?

### 3. *Sparganium americanum* Nutt.

Bur-reed

REFERENCE: Riddell 1834:158 (standing pools).

NOTE: No specimens seen from Franklin Co. Not mapped for Franklin Co. by Braun 1967:24 (illus. p. 22).

### 4. †*Sparganium chlorocarpum* Rydb.

Small Bur-reed

Stigma 1, some carpellate heads supra-axillary; rare. Syn.: *S. diversifolium* of American authors, not Graebn., *S. simplex* of ed. 6 of Gray's Manual, in large part

REFERENCES: Riddell 1834:158 (*Sparganium angustifolium*, standing pools); Braun 1967:24 (illus. p. 21); Stuckey & Roberts 1977:27; Stuckey & Roberts 1982:27; McCance 1984:A-17.

HERBARIUM RECORD: 25 Jun 1892—Cols., W. Kellerman.